



**6712-01**

**FEDERAL COMMUNICATIONS COMMISSION**

**47 CFR Part 54**

**[WC Docket Nos. 10-90 and 13-184; FCC 14-189]**

**Modernization of the Schools and Libraries “E-rate” Program and Connect America Fund**

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** In this document, the Federal Communications Commission (Commission) takes the next critical steps to modernize the Universal Service Fund’s Schools and Libraries program, known as E-rate. Building on the E-rate Modernization Order, the Commission adopted in July, the improvements to the program that the Commission adopts in this Order seek to close the high-speed connectivity gap between rural schools and libraries and their urban and suburban counterparts, and provide sufficient and certain funding for high-speed connectivity to and within all eligible schools and libraries. The Commission takes these actions to ensure the continued success of the E-rate program as it transitions from supporting legacy services to focusing on meeting the high-speed broadband connectivity needs of schools and libraries consistent with the recently adopted program goals and long-term connectivity targets. In the Order on Reconsideration, the Commission grants in part the petitions for reconsideration of the areas designated as urban for purposes of the E-rate program. The Commission also denies petitions for reconsideration of the document retention period, the phase out of support for telephone components and other services, and funding commitments that cover multiple years. At the same time, the Commission clarifies our cost effectiveness test for individual data plans and the cost allocation rules for circuits carrying voice services.

**DATES:** Effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**], except for amendments to §§ 54.313(e)(2) and (f)(1), 54.503(c)(1), and 54.504(a)(1)(iii), which are subject to the PRA and OMB approval of the information collection requirements. FCC will publish a document in the Federal Register announcing the effective date. The amendments to §§ 54.308(b), 54.309(b), 54.505(b)(3) introductory text and (b)(3)(i), and 54.507(a)

introductory text , (a)(1), and (c) are effective on July 1, 2015; and amendments to §§ 54.505(b)

introductory text, (c), and (f) and 54.518 are effective on July 1, 2016.

**FOR FURTHER INFORMATION CONTACT:** Kate Dumouchel, Wireline Competition Bureau, Telecommunications Access Policy Division, at (202) 418-7400 or TTY: (202) 418-0484.

**SUPPLEMENTARY INFORMATION:** This is a summary of the Commission's Second Report and Order and Order on Reconsideration, in WC Docket Nos. 10-90 and 13-184; FCC 14-189, adopted on December 11, 2014 and released on December 19, 2014. The full text of this document is available for public inspection during regular business hours in the FCC Reference Center, Room CY-A257, 445 12th Street, SW, Washington, DC 20554. Or at the following Internet address:

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-14-189A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-189A1.pdf).

## **I. INTRODUCTION**

1. In the Second E-rate Modernization Report and Order (Order) and Order on Reconsideration, we take the next critical steps to modernize the Universal Service Fund's Schools and Libraries program, known as E-rate. Building on the E-rate Modernization Order we adopted in July, the improvements to the program that we adopt in this Order seek to close the high-speed connectivity gap between rural schools and libraries and their urban and suburban counterparts, and provide sufficient and certain funding for high-speed connectivity to and within all eligible schools and libraries. We take these actions to ensure the continued success of the E-rate program as it transitions from supporting legacy services to focusing on meeting the high-speed broadband connectivity needs of schools and libraries consistent with the recently adopted program goals and long-term connectivity targets.

2. Through the changes we make to the E-rate program, we take further steps forward in our effort to modernize the program and place it on firm footing to meet the program goals. As the changes made in this Order and the E-rate Modernization Order are implemented, we will continue to identify additional steps that can to be taken to further modernize the E-rate program and achieve our goals of: (1) ensuring affordable access to high-speed broadband; (2) maximizing the cost-effectiveness of spending for E-rate supported purchases; and (3) making the E-rate application process and other E-rate processes

fast, simple, and efficient. We recognize that these changes will require adjustments by applicants, service providers, and other stakeholders, and in conjunction with USAC we commit to ensure that sufficient training and educational resources are provided to assist these groups during this transition. Finally, as always, we welcome feedback from applicants, service providers, teachers, librarians, state and local governments, and all other stakeholders on additional measures to reach our goals faster and improve the E-rate program.

## **II. MAXIMIZING SCHOOLS' AND LIBRARIES' OPTIONS FOR PURCHASING AFFORDABLE HIGH-SPEED BROADBAND CONNECTIVITY**

3. We focus in this section on providing schools and libraries, particularly those in rural areas, more options for purchasing affordable high-speed broadband connections. We agree with the many commenters who make clear that in order to meet the Commission's connectivity targets, in addition to increased funding, we must make changes to the program to meet the need for affordable high-speed connectivity to schools and libraries. The CoSN Survey identifies the monthly cost of recurring Internet access services and an inability to pay for the capital or non-recurring costs to get high-speed connections as the two biggest barriers to increasing connectivity to schools. Likewise, the American Library Association (ALA), the Public Library Association, and others indicate that lack of access to broadband infrastructure and the high costs of recurring services hamper libraries' ability to meet our E-rate goals. As ALA has explained, our nation's libraries depend on affordable, scalable, high-capacity broadband in order to complete education, jumpstart employment and entrepreneurship, and foster individual empowerment and engagement. To meet the connectivity targets we adopted in the E-rate Modernization Order, substantial numbers of schools and libraries will need to find vendors willing and able to provide affordable high-speed connections to their buildings and be able to afford the recurring costs of those high-speed connections.

4. Over the course of the last 18 years, the Commission has recognized the importance of giving local school districts and libraries the flexibility to purchase E-rate supported services that meet their needs. With rare exceptions, however, the program has not adopted new tools for applicants to use

in purchasing connectivity. The actions we take today give applicants more options for purchasing connectivity and represent a crucial step in meeting our first goal for the E-rate program: ensuring affordable access to high-speed broadband sufficient to support digital learning in schools and robust connectivity for all libraries.

5. The E-rate program historically has fully funded all priority one (now category one) funding requests, which include funding requests for high-speed broadband connections to schools and libraries. Despite the program's history of funding all priority one requests, the record demonstrates that a substantial percentage of U.S. schools do not meet the short term Internet Access connectivity target of 100 Mbps per 1,000 users that we adopted in the E-rate Modernization Order. Similarly, the record demonstrates that most libraries do not meet our short-term connectivity targets. In addition, by not effectively enabling E-rate applicants to undertake large construction projects, purchase dark fiber and consider self-construction of high-speed networks, our current rules and procedures prevent some applicants from choosing the most cost-effective options for increasing the high-speed broadband connections to their school and library buildings.

6. We therefore take actions targeted at closing the rural connectivity gap and increasing affordable high-speed broadband connections to schools and libraries. First, we direct USAC to suspend its policy requiring applicants to amortize over multiple years upfront charges for category one special construction exceeding \$500,000 while allowing applicants to pay the non-discounted portion of category one special construction charges over four years. Next, in limited circumstances and with appropriate safeguards, we adopt changes to the E-rate program's rules to equalize the treatment of lit and dark fiber, to allow applicants to self-construct and operate connections to their school and library buildings, and to incentivize federal-state cooperation in deploying broadband infrastructure to schools and libraries in hard to connect areas. Finally, we establish an obligation for recipients of high-cost support to offer broadband service to requesting eligible schools and libraries at rates reasonably comparable to rates charged in urban areas.

7. We direct USAC, working with the Wireline Competition Bureau (Bureau) and the Office of the Managing Director (OMD), to implement the changes we make to the program in this Order. In so doing, we reaffirm our delegation of authority to the Bureau to issue orders interpreting our E-rate rules and otherwise provide clarification and guidance in the case of any ambiguity that may arise as necessary to ensure that support for services provided to schools and libraries operate to further the goals we have adopted for the E-rate program. We also direct the Bureau, working with OMD and other Commission staff, to make changes to the E-rate information collections, as needed, and to provide direction to USAC to implement the changes.

8. These actions will result in increased high-speed broadband connections to schools and libraries in all areas in furtherance of the E-rate program's Internet access and WAN/last-mile goals and are consistent with section 254 of the Act, which, inter alia, directs the Commission to "enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services" for schools and libraries. Moreover, these changes will allow applicants more flexibility to pursue the most cost-effective option for connecting schools and library buildings. Although these incentives will likely have the greatest effect on broadband availability and affordability in rural and high-cost areas, they will also give E-rate applicants in urban areas more purchasing options.

9. We are cognizant of the fact that some commenters have expressed concerns that the cumulative effect of the actions we take in this order to facilitate greater use of E-rate dollars for special construction charges could result in insufficient funds being available for other category one expenses and category two costs. In order to address these concerns, we require USAC to report to the Bureau if E-rate commitments for special construction charges resulting from the rules we adopt today exceed ten percent of the total E-rate cap for any given funding year. In determining whether a report is required, USAC shall consider the commitments for special construction charges for dark fiber, self-construction, and for special construction that takes advantage of state matching funds for a given funding year. Any such report shall also provide information to the Bureau concerning the cost-effectiveness of the special construction projects to which USAC has committed funding. That report shall be informed by the work

done on cost-effective analysis as provided for in this Order. The Bureau shall present the findings to the full Commission for its consideration of the impact of special construction charges on the long-term financial viability of the program and the ability of the Commission to meet the E-rate program goals adopted in the July E-rate Modernization Order.

**A. Making the Payment Options for Special Construction Charges More Flexible (WC Docket 13-184)**

10. To help applicants overcome the cost barrier to high-speed broadband deployment projects, we make a set of administrative and rule changes that will help schools and libraries more easily undertake projects requiring special construction charges. First, we direct USAC to temporarily suspend its policy of requiring applicants to amortize large non-recurring category one charges to encourage vendors to bid on E-rate projects requiring special construction. Second, we allow applicants to pay the non-discounted share of category one special construction charges over four years rather than requiring schools or libraries working with limited budgets to pay the entirety of their share in a single year. We anticipate these changes will provide the right incentives to schools and libraries to consider necessary broadband infrastructure deployments and will attract a diverse slate of vendors to such projects from which the applicants can choose.

**1. Suspending USAC's Multi-Year Amortization Policy for Non-Recurring Construction Costs**

11. To encourage efficient investment in high-speed broadband infrastructure, including the deployment of fiber, we direct USAC to suspend for four years its policy of requiring applicants to amortize large category one non-recurring charges. Encouraging construction of high-speed connections to schools and libraries is a crucial part of our effort to ensure that all schools and libraries achieve our connectivity targets. Suspending the amortization requirement will give applicants the flexibility to plan large construction projects knowing they can recover the E-rate supported portion of any non-recurring costs upfront, thus providing greater certainty regarding funding and removing this potential barrier to infrastructure investment.

12. We are comfortable taking this step not only because it will encourage deployment but also because the concerns described by the Commission in 2000 that caused USAC to institute this restriction have proven to be not well-founded. In the Brooklyn Order, the Commission expressed concern that large upfront payments for non-recurring services could create a critical drain on the Fund, thereby limiting the number of schools and libraries that would receive funding. To prevent such an occurrence, the Commission held that applicants must amortize upfront non-recurring charges when such charges vastly exceed the monthly recurring charges of the relevant service. In response to this general direction, USAC implemented a policy requiring applicants to amortize upfront or non-recurring charges of \$500,000 or more over a period of at least three years.

13. Large upfront payments have not proven to be a drain on the Fund, and would not have been even if they had not been amortized. Moreover, we agree with commenters that argue that suspension of this amortization policy is likely to incentivize efficient investments in infrastructure, including the deployment of fiber. As commenters point out, USAC's current amortization policy requires many service providers to obtain financing for special construction projects, who then pass along the costs of this financing to applicants in the form of larger monthly recurring costs. Consequently, USAC's current amortization policy may actually increase the total costs borne both by applicants and the program. In addition, ALA and other commenters indicate that lack of certainty about the ability to recover costs in future funding years may deter some applicants from investing in large infrastructure projects that will be amortized over future funding years.

14. Some commenters express the same concern articulated by the Commission in the Brooklyn Order, that if large numbers of applicants seek support for substantial upfront construction charges, the Commission could receive a drastic increase in category one requests. For that reason, we choose to test the impact of abolishing the amortization requirement by temporarily suspending the requirement for the next four funding years. We are confident that temporarily suspending the amortization requirement will not create risk of insufficient category one support available for other schools and libraries, particularly in light of the increase in the E-rate funding cap that we adopt today. In

the E-rate Modernization Order, we began the process of focusing E-rate support on high-speed broadband for our nation's schools and libraries. In this Order, as discussed in more detail below, we are raising the annual E-rate cap, in part to ensure there are sufficient category one funds available to meet the build-out costs of connecting currently underserved schools and libraries. Moreover, while some providers will offer an upfront payment option, we recognize that in other instances providers will continue to incorporate the cost of building out to schools and libraries into their recurring charges. In addition, because applicants are responsible for paying the non-discounted portion of the services they purchase, we expect that this requirement will deter some applicants from undertaking expensive construction projects. Applicants also remain subject to the requirement to select the most cost-effective service offering, which will further dampen the likelihood of a drastic increase in category one requests.

15. We therefore direct USAC to suspend application of its multi-year amortization policy for funding years 2015 through 2018 and to allow applicants to seek support for upfront or non-recurring charges without imposing any amortization requirements. In evaluating this USAC requirement, we considered a permanent end to the requirement instead of merely suspending its application. However, we are cognizant of the interest reflected in the Brooklyn Order of balancing the immediate needs of some E-rate applicants against the needs of all of the applicants. We therefore adopt the additional safeguard of suspending rather than eliminating USAC's amortization policy for the limited duration of the next four funding years. We expect that USAC will keep the Bureau apprised of how many and to what extent applicants utilize this suspension for the deployment of infrastructure. We also direct the Bureau to revise our data collection to collect such information beginning in funding year 2016. We believe this balanced approach will provide us with sufficient data to determine the best course forward for subsequent funding years.

## **2. Allowing Applicants to Pay the Non-Discounted Portion of Non-Recurring Construction Costs over Multiple Years**

16. To address the challenge some applicants face in having sufficient funds to pay the non-discounted portion of special construction charges, we allow applicants to enter into an installment



payment plan with their service providers for the non-discounted portion of category one special construction charges beginning in funding year 2016. Currently, applicants must pay the entire non-discounted portion of a special construction project to the service provider within 90 days of delivery of service. However, the record demonstrates that obtaining funding to pay the entire non-discounted share of special construction charges is a major barrier to high speed connectivity for some schools and libraries. To help schools and libraries overcome this barrier, we will allow them to pay the non-discounted portion of special construction charges in installment payments of up to four years from the first day of the relevant funding year. Pursuant to our direction above to USAC to suspend its amortization policy, applicants will be able to seek the discounted portion of those same category one special construction charges during a single funding year.

17. Applicants who are interested in this flexible payment arrangement must specifically include this request in their bids on their FCC Forms 470. By notifying all potential bidders of their interest, applicants will ensure that vendors know and understand all expected terms and conditions of the school or library's bid and that all potential service providers who are willing to offer an installment payment option will be on notice of the applicant's interest and will bid accordingly.

18. Service providers are under no obligation to allow this payment arrangement and should not do so in the absence of such a request on an applicant's FCC Form 470. However, those that do offer installment payments in response to an FCC Form 470 seeking bids that include this option must specify in their bid submission whether they are willing to allow this payment arrangement and must also disclose all material terms of that arrangement, including any interest rate they would charge the applicant and the term of the installment payment plan they are offering.

19. We recognize that allowing applicants greater flexibility to pay the non-discounted cost of special construction charges combined with the other changes we make in this Order could increase demand for category one support. However, a temporary increase in the demand to the Fund for special construction charges will ultimately be beneficial to E-rate applicants and the stability of the Fund. It will result in more students and library patrons enjoying access to scalable, high-speed broadband connections

and we expect increasing flexibility for applicant's non-recurring payments for special construction will allow applicants to structure the agreements with service providers so as to lower future costs for recurring services. Moreover, the increase in the E-rate funding cap we adopt today should alleviate concerns resulting from any temporary increase in demand for special construction charges.

20. As with our suspension of the amortization requirement, we expect that USAC will keep the Bureau apprised of how many and to what extent applicants utilize this installment payment option for the deployment of infrastructure. We also direct the Bureau to consider how best to modify our data collections to capture information about the extent to which applicants take advantage of this option and to require reporting and certifications by applicants and service providers regarding the payment of the applicant's non-discounted share of special construction charges.

21. We also amend § 54.504(a)(1)(iii) to require applicants that take advantage of this flexible payment option to certify on their FCC Forms 471 that they are able to pay all required installment payments. Our rule currently requires applicants to certify that they are able to pay the discounted charges for eligible services from funds to which access has been secured in the current funding year. This change is necessary because applicants on an installment plan may not have secured all of their non-discounted payments in the applicable funding year.

22. We also take this opportunity to remind applicants and vendors that it is a violation of our competitive bidding rules for service providers to offer to pay the non-discounted portion of E-rate supported services, and a violation of our gift rules and the prohibition on the receipt of rebates for services or products purchased with E-rate discounts to forgive payment of such charges or to accept such payment forgiveness. By extension, service providers that accept installment payments of the non-discounted share of E-rate supported services cannot forgive any or all such payments. Because interest and finance charges are not eligible for E-rate support, applicants may not seek support for these charges. Additionally, we remind applicants and service providers that our document retention rules require them to maintain records of payments made so that USAC can verify that an applicant has paid its full non-

discounted share. Applicants should also be prepared to provide documentation verifying their agreements with service providers for an installment payment plan.

**B. Modifying the Commission’s Eligible Services List and Rules to Expand Access to Low Cost Fiber (WC Docket 13-184)**

23. To further expand the competitive options for schools and libraries seeking high-speed broadband connectivity and to drive down broadband costs for applicants and the Fund, we amend our eligible services list, effective in funding year 2016, to equalize the E-rate program’s treatment of lit and dark fiber; amend our rules to allow applicants to construct their own fiber networks under limited circumstances; and incent states to identify and provide financial assistance for last-mile connections to underserved schools and libraries.

**1. Equalizing the Treatment of Lit and Dark Fiber**

24. First, we adopt the Commission’s proposal in the E-rate Modernization NPRM, 78 FR 51597, August 20, 2013, to equalize the E-rate program’s treatment of lit and dark fiber. Citing the cost savings and bandwidth upgrades that dark fiber can provide, school, library, and local government commenters from urban and rural areas across the country overwhelmingly support equalizing the treatment of lit and dark fiber. The availability of a full dark fiber option will help some E-rate applicants attract multiple competitive bids for construction and deployment and will drive down broadband costs for schools and libraries, as well as the E-rate program. We will equalize the treatment of dark and lit fiber beginning in funding year 2016.

25. Dark-fiber leases and other dark-fiber service agreements are commercial arrangements in which a broadband customer purchases use of a portion of a provider-owned and maintained fiber network separately from the service of lighting (i.e. transmitting information over) that fiber. Many competitive providers now offer such arrangements. In the Schools and Libraries Sixth Report and Order, 75 FR 75393, December 3, 2010, the Commission concluded that expanding access to such arrangements would “increase competition among providers of fiber and ensure[] that schools and libraries . . . pay less

for the same or greater bandwidth,” and therefore added dark fiber to the E-rate eligible services list. The Commission limited dark-fiber support in several ways, however, “pending further inquiry into the potential impact on the E-rate fund” of fully equalizing the treatment of lit and dark fiber services. The E-rate program currently supports the recurring costs of leasing lit and dark fiber as category one services. When a school or library leases lit fiber, the modulating electronics necessary to light that fiber are funded as a category one service. By contrast, a school or library that leases dark fiber currently cannot receive category one support for the modulating electronics necessary to light the fiber. In addition, the E-rate program currently provides category one support for all “special construction charges” for leased lit fiber, but does not support special construction charges for leased dark fiber beyond a school or library’s property line. Having now developed a further record on this issue, we conclude that leveling the playing field between lit and dark fiber will expand options for applicants and will likely reduce costs for the Fund.

26. We received widespread support from a broad cross-section of E-rate stakeholders—from schools and state E-rate experts to municipalities and carriers—who believe the equalization of the treatment of lit and dark fiber in the E-rate program carries substantial benefits. Commenters contend, for example, that funding dark fiber on an equal footing with lit fiber will provide more choices and lower costs to schools and libraries seeking enhanced connections. The city of Boston points out that “distinguishing between lit and dark fiber serves no useful purpose” in the E-rate program and that dark fiber should be placed on an equal footing with lit fiber if it is the proper solution to the needs of the school or library. State-level E-rate coordinators take a similar view, as do competitive providers.

27. While most schools and libraries seeking high-speed broadband purchase lit fiber services, the record makes clear that dark fiber can be a powerful option for a significant minority to drive down broadband costs while increasing capacity. For example, Maine, which purchases school and library connectivity through a statewide consortium, has leased 1 Gbps dark fiber circuits to 75 schools across the state. Maine reports that because its dark-fiber service provider charges on a per-mile basis rather than based on bandwidth used, the state consortium’s all-inclusive cost for 1 Gbps connectivity to

these 75 schools is approximately \$500 to \$750 per-school per-month – roughly the same per-circuit price the state consortium pays for one percent of that bandwidth (10 Mbps) for lit circuits from other providers. Similarly, the University System of Georgia’s statewide research and education network, PeachNet, is employing a dark fiber solution to significantly increase the high-speed broadband connectivity to local school districts. Beginning July 2015, PeachNet will increase the broadband connectivity to each local school district from 3 Mbps per school to 100 Mbps per schools while reducing the Georgia Department of Education’s per Mbps costs by 96 percent.

28. Dark-fiber services can also be a cost-effective option for smaller, rural districts that otherwise face challenges affording high-speed circuits. For example, the Newton Public School District, an 11-school district centered in Newton, Kansas, recently upgraded to a district-wide 1 Gbps WAN while decreasing costs by moving to a dark-fiber solution. Likewise, the Morgan County and Bleckley County school systems in Georgia, which each serve rural populations, connect their schools through cable-provided dark fiber at speeds of 1 to 10 Gbps. Weslaco ISD, located in the south Texas Rio Grande Valley, serves a largely poor and minority population, including many migrant families and relies on dark-fiber leases to connect several of its 17 school sites to its central network operations center.

29. Equalizing the treatment of lit and dark fiber is also consistent with the Commission’s approach in the Healthcare Connect Order, 78 FR 38606, June 27, 2013. There, guided by the principle that “providing flexibility for HCPs [health care providers] to select a range of services . . . will maximize the impact of Fund dollars (and scarce HCP resources),” the Commission concluded that “supporting dark fiber provides an additional competitive option to help HCPs obtain broadband in the most cost-effective manner available in the marketplace.” In particular, and in contrast to the current E-rate rules, the Healthcare Connect Order authorized support for special construction charges for both lit and dark fiber, as well as for the installation of equipment and services “necessary to make [dark fiber] service functional,” including modulating electronics.

30. Following this recent precedent and given the broad support in the record, we will equalize the treatment of dark- and lit-fiber services within E-rate, beginning in funding year 2016.

Specifically, adopting the Commission's proposal in the E-rate Modernization NPRM, we will provide category one support for special construction charges for leased dark fiber, as we do for leased lit fiber, and we will provide category one support for the modulating electronics necessary to light leased dark fiber.

31. To prevent applicants from using E-rate discounts to acquire unneeded capacity or warehouse dark fiber for future use, we maintain the safeguards that the Commission adopted in the Schools and Libraries Sixth Report and Order, and extend those it adopted in the Healthcare Connect Order to E-rate. First, to prevent warehousing of excess fiber capacity, applicants cannot receive E-rate funding for recurring costs associated with dark fiber until it is lit, and applicants may only receive funding for special construction charges for dark fiber if it is lit within the same funding year.

32. To provide applicants sufficient time to complete special construction projects before a funding year begins, we codify the bulk of USAC's current policy regarding special construction charges. Specifically, we allow category one infrastructure costs incurred six months prior to that funding year, provided the following conditions are met: (1) the construction takes place only after selection of the service provider pursuant to a posted FCC Form 470 (or any successor form); (2) a category one recurring service must depend on the installation of the infrastructure; and (3) the actual service start date of that recurring service is on or after the start of the funding year (July 1). We also direct USAC to accept invoices for special construction charges meeting these conditions dated during this period of time before the start of the funding year. However, applicants that choose to start construction before they receive a funding commitment bear the risk that their funding request will not be granted. Because special construction charges for leased dark fiber are now eligible for category one support, applicants seeking support for special construction for dark fiber may avail themselves of this limited exception for early construction. In addition, as in the Healthcare Connect Order, we will also allow applicants to receive up to a one-year extension to light fiber if they demonstrate that construction was unavoidably delayed due to weather or other reasons.

33. Second, to ensure that applicants treat the price of eligible products and services as the primary factor in selecting winning bids, we adopt measures to ensure that applicants fairly compare dark fiber with other options. If a school or library intends to seek support for special construction charges associated with dark fiber, it must also solicit proposals to provide the needed services over lit fiber. Similarly, if a school or library intends to seek support to lease and light dark fiber, the schools or library must also solicit proposals to provide the needed services over lit fiber over a time period comparable to the duration of the dark-fiber lease or IRU. In addition, if an applicant intends to request support for equipment and maintenance costs associated with lighting dark fiber, it must include these elements in the same application as the dark fiber so that USAC can easily review all costs together. These safeguards amply address concerns that schools and libraries could choose dark-fiber solutions when not the most cost-effective solution, that they will exclude certain costs when comparing dark- and lit-fiber solutions, or that they will warehouse spare capacity. Indeed, the safeguards reflect the suggestions of many of the commenters who raised these concerns in the record.

34. USTelecom argues that the protections adopted in the Healthcare Connect Order will prove insufficient in the E-rate context because “USAC-conducted cost-effectiveness reviews [are] not viable for the E-rate program” and “the E-rate program – at least as it is currently structured – provides fewer incentives for applicants to make cost-effective choices than the Healthcare Connect Fund” because the top discount rate is higher. We find both arguments unpersuasive. While it is true that the top discount rate in the E-rate program is higher than the discount rate for recipients of Healthcare Connect funds, E-rate discounts vary, resulting in a substantial number of E-rate applicants receiving discount rates below those discount rates received by rural health care providers. In addition, all E-rate applicants are required to engage in cost-effective purchasing. Further, USAC routinely conducts cost-effectiveness reviews of E-rate applications every year and we are confident it can do so for applicants choice of dark-fiber solutions, just as it does for all the other purchasing decisions applicants make.

35. Incumbent providers also assert that equalizing the treatment of lit and dark fiber “undermines national broadband policy” because it “takes traffic away from actual or potential last mile

facilities of broadband service providers, which frustrates their ability to utilize schools as anchor tenants for broadband investment in surrounding communities, especially in low density areas.” It is our view that vibrant competition on an even playing field generally brings the lowest prices and best promotes “national broadband policy.” Accordingly, within a framework that treats lit- and dark-services equally, incumbents are free to offer dark-fiber service themselves, or to price their lit-fiber service at competitive rates to keep or win business – but if they choose not to do so, it is market forces and their own decisions, not the E-rate rules, that “frustrate[] their ability to utilize schools as anchor tenants.” Nor does it “take[] traffic away from actual or potential last mile facilities of broadband service providers,” if a competitor wins school and library business, for competitive providers of dark-fiber service are also “broadband service providers,” and our role in the E-rate context is to encourage participation in the E-rate program and foster access to broadband by schools and libraries, and not favor one provider over another.

36. Finally, USTelecom reiterates its statutory argument from past proceedings that the Act prohibits support for dark fiber because it is not a “service” under section 254. The Commission has rejected this interpretation on multiple prior occasions, and commenters neither offer new arguments nor identify new facts that would warrant revisiting this conclusion. USTelecom contends that even if dark fiber itself qualifies for support, modulating electronics necessary to light dark fiber and special construction charges for leased dark fiber do not, because whereas “dark fiber is part of the transmission path that enables the requisite functionality (delivery of voice, video and/or data) to be delivered to the classroom,” modulating electronics and special construction charges are “unrelated to the transmission of information to individual classrooms.” USTelecom provides no explanation for this assertion, however, nor can we imagine any. Lighting dark fiber “enables the requisite functionality (delivery of voice, video and/or data)” to just the same extent as the dark fiber itself. Indeed, modulating electronics are a critical component of the E-rate supported bundle when broadband is sold as a lit-fiber service. Likewise, just as special construction charges for lit fiber are eligible because they are part of the cost of bringing broadband connections to school and library buildings, so too are special construction charges for dark fiber. Further, we continue to believe that dark fiber does enhance access to advanced



telecommunications and information services consistent with section 254(h)(2)(A). Therefore, consistent with our policy conclusion that lit- and dark-fiber services should be treated equally, we see nothing in the statute that would require us to draw a distinction.

## **2. Permitting Self-Construction of High-Speed Broadband Networks**

37. We also promote high-speed broadband connectivity by permitting applicants to construct their own or portions of their own networks when self-construction is the most cost-effective solution. We agree with commenters that argue that allowing E-rate applicants to own all or portions of their own networks can help deliver the most cost-effective broadband services and provide financial stability for certain E-rate recipients. We also agree with commenters that argue for safeguards to make sure that self-construction is only available in limited circumstances when it is demonstrated to be the most cost-effective solution. As with our equalization of lit and dark fiber, we allow the self-construction option beginning in funding year 2016.

38. Providing support for the self-construction of high-speed broadband networks is also consistent with the Communications Act, as the Commission recently found in the Healthcare Connect Order:

[S]ection 254(h)(2) provides ample authority for the Commission to provide universal service support for HCP access to advanced telecommunications and information services, including by providing support to HCP-owned network facilities. Nothing in the statute requires that such support be provided only for carrier-provided services. Indeed, prohibiting support for HCP-owned infrastructure when self-construction is the most cost-effective option, would be contrary to the command in section 254(h)(2)(A) that support be “economically reasonable.”

We find this reasoning equally applicable to self-construction undertaken by schools and libraries that participate in the E-rate program, and we further find that the record now before us demonstrates that support for the self-construction of high-speed broadband networks will fulfill the mandate of section 254(h)(2)(A). As explained above, for example, we are adopting safeguards to ensure that self-

construction is available only in limited circumstances when it is demonstrated to be the most cost-effective solution to obtain high-speed broadband. The record shows that under these circumstances, support for self-construction will be “economically reasonable,” while also fulfilling the statutory mandate that we enhance, “to the extent technically feasible . . . , access to advanced telecommunications and information services for all public and nonprofit elementary and secondary classrooms . . . and libraries.”

39. Self-construction can be a useful tool for some schools and libraries when they receive insufficient responses to their FCC Form 470 and associated requests for proposals (RFPs). Testing the benefits of allowing self-construction, the Commission permitted applicants to construct their own networks in the Rural Health Care Pilot Program that preceded the Healthcare Connect Order. Eight of the 50 pilot program participants elected to use support for self-construction for parts of their networks, with two of those participants opting to construct their whole networks. The participants found self-construction to be a useful tool for cost-effective network deployment. Because of the success of the Rural Health Care Pilot Program, the Commission adopted rules permitting self-construction, subject to certain safeguards, for the Rural Health Care Program participants in the Healthcare Connect Order. We follow the model the Commission adopted in the Healthcare Connect Order here, to ensure that the Fund supports self-construction only when it is the most cost-effective option.

40. Some commenters express concern about the cost-effectiveness of self-construction and the quality of service it would provide and either oppose a self-construction option or request safeguards to ensure that schools and libraries only have the option of self-construction when it is the most cost-effective approach. Other commenters argue that we should impose a cap on self-construction, as the Commission did in the Rural Health Care Program. Additionally, NCTA recommends that we only authorize funding for self-construction by schools and libraries where they can demonstrate that (1) there are no commercial alternatives; (2) there are no more cost-effective methods to receive high-speed broadband; and (3) they have the expertise to handle the burden of operating and maintaining a fiber network. For its part, expressing concern about overbuilding, NTCA has argued that self-construction

should only be allowed where an applicant has sought broadband services from existing providers and networks, and connectivity is not available from those providers and their networks; the existing provider is given the opportunity to demonstrate that it can provide the broadband service at target speeds within 180 days; there is a meaningful matching funds requirement; applicants are prohibited from using revenue from excess capacity as a source of matching funds; and applicants demonstrate that they have selected the option that will be most cost-effective over the life of the asset.

41. We agree with many of the concerns expressed by commenters, particularly those aimed at ensuring that self-construction is only undertaken when it is the most cost-effective option, but we do not agree with all of the limitations on self-construction suggested by commenters. Therefore, we adopt safeguards ensuring that applicants seek E-rate support for self-construction only when it is the most cost-effective option, and requiring that they actually use the self-constructed facilities, but do not adopt many of the other limitations on self-construction suggested by commenters.

42. In allowing self-construction under certain circumstances, we adopt several safeguards to ensure that the self-construction option will be available only when it is necessary to enable applicants to access fiber at cost-effective rates. First, as the Commission did for the Rural Health Care Program, we allow self-construction only where self-construction is demonstrated to be the most cost-effective option after competitive bidding. USAC already has experience in evaluating cost-effectiveness for large-scale projects from the Rural Health Care Program. Applicants interested in pursuing self-construction must solicit bids for both service and construction in the same FCC Form 470 and must provide sufficient detail so that cost-effectiveness can be evaluated based on the total cost of ownership over the useful life of the facility for applicants who pursue the self-construction option. As the Commission did in the Healthcare Connect Order, we permit applicants who have received no bids on a services-only posting to pursue a self-construction option through a second posting for the same funding year.

43. Second, as with applicants that seek E-rate support for dark fiber, to ensure that we are paying for necessary services, applicants may only receive funding for self-construction if the facilities are built and used within the same funding year. Pursuant to the prohibition against reselling service

purchased with E-rate discounts, applicants may only receive E-rate support for services that they use. In Section II.B.1, we codified a limited exception to allow funding for special construction charges for projects started up to six months in advance of the funding year, provided the following conditions are met: (1) the construction begins only after selection of the service provider pursuant to a posted FCC Form 470 (or any successor form); (2) a category one recurring service must depend on the installation of the infrastructure; and (3) the actual service start date is after the start of the funding year (July 1). This exception applies to self-construction. As we do with dark fiber, we will also allow applicants to receive up to a one-year extension of the service start date if they demonstrate that construction was unavoidably delayed due to weather or other reasons.

44. Third, the E-rate program rules require applicants to secure all of the resources necessary to make effective use of the services they purchase. We are confident that allowing schools and libraries to select a self-construction option with these meaningful safeguards will give applicants that have been unable to find providers willing to build affordable high-speed connections another option for purchasing such connections.

45. We do not adopt NTCA's proposals that we give existing providers a separate opportunity to demonstrate that they are able to provide service at the targeted speeds, because to do so would interfere with the competitive bidding process, which is the E-rate program's primary tool for ensuring schools and libraries select the most cost-effective option. Moreover, because E-rate applicants' requests for bids are publicly available, providers all have an equal opportunity to bid to provide E-rate services, and we expect that where there are existing providers and networks capable of providing service at the targeted speeds, they will be well situated to offer very competitive pricing through the competitive bidding process.

46. At this time, we also decline the suggestion that we set a cap on the amount of funding available for self-construction projects. The first goal we adopted for the E-rate program in the E-rate Modernization Order is ensuring that schools and libraries have affordable access to high-speed broadband. The record is clear that self-construction can provide one method for some schools and

libraries to achieve that goal. Setting a cap on self-construction would create funding uncertainty for those schools and libraries that want to explore whether self-construction would be the most cost-effective option for them. In recognition of commenters' concerns about the amount of funding spent on self-construction above, we have directed USAC and the Bureau to report on the impact on the Fund of special construction charges, including those for self-construction.

47. We also decline to adopt USTelecom's suggestion that, if we make a self-construction option available, we target it to schools and libraries that do not have broadband and are located in rural areas. We do expect that the self-construction option will be most appealing to schools and libraries in rural areas that have not been able to purchase affordable high-speed broadband. We also expect that providers that already provide fiber-based services to a school or library should almost always be able to offer the most competitive pricing to that school or library. However, we decline to limit the self-construction option to applicants without broadband and in rural areas because there are schools and libraries that currently have broadband access, including in non-rural areas, that may be able to purchase more affordable broadband services if they take advantage of the self-construction option. Moreover, having self-construction as an option for all schools and libraries will help drive competition, thereby maximizing the cost-effective use of E-rate funding, which is one of the goals that we have adopted for the program.

48. A commenter raised concerns that permitting self-construction of networks could violate the Antideficiency Act because it would require long-term commitments. Consistent with the rules of the E-rate program, applicants will receive funding for self-construction for one funding year at a time only, so there is no danger of long-term, unfunded commitments that could violate the Antideficiency Act.

### **3. Additional Discounts When States Match Funds for High-Speed Broadband Construction**

49. To break down barriers to high-speed broadband access in rural, Tribal, and other unserved areas, we will provide additional category one funding to match state funding for special construction charges to connect schools and libraries to high-speed broadband services that meet the long

term capacity targets we adopted in the E-rate Modernization Order. The record demonstrates that additional funds are needed for fiber builds and that states can play a powerful role catalyzing construction of high-speed broadband connections to schools and libraries. For example, the state of North Carolina has invested approximately \$150 million in broadband deployment and, as a result of this investment, 98 percent of North Carolina schools have a fiber connection. Maine has been able to connect a significant portion of its schools by constructing its own fiber loop. Additionally, California recently budgeted \$26.7 million for grants for last-mile build-out projects for public school districts, county offices of education, and direct-funded charter schools.

50. In light of the role states can and do play in spurring broadband connectivity, some commenters suggested that we increase the discount rate for one-time capital investments to build out statewide fiber networks, while others suggested a separate fund or priority for capital investments. We agree that states are well-situated to bolster high-speed broadband construction to schools and libraries. To encourage state participation, beginning in funding year 2016, we will increase an applicant's discount rate for special construction charges up to an additional 10 percent in order to match state funding the applicant receives on a one-dollar-to-one-dollar basis. Working in tandem, this additional state and E-rate program funding will reduce the money owed by applicants for what would otherwise be the applicant's non-discount share to connect schools and libraries to high-speed broadband services. By way of example, an applicant with a 90 percent discount rate would receive its 90 percent discount on the E-rate eligible construction and, if the state provided an additional contribution to the project (such as 5 percent of the total project cost), the Fund will match the state's contribution (here, an additional 5 percent of the total project cost). A network with a 60 percent discount rate, would receive its 60 percent discount plus an additional 10 percent if the state were to contribute 10 percent of the cost of the build-out. States may contribute more than 10 percent funding to the project but the E-rate program will limit its match to 10 percent of the project cost (in addition to the existing program discount rate). Because this match will only be available for special construction charges, applicants should create separate funding requests on

their FCC Forms 471 for special construction and for recurring charges. As we monitor the impact of this category one match on the E-rate program, we may consider increasing the maximum match.

51. We expect this additional funding will encourage states to identify high-speed connectivity gaps—those schools and libraries that do not have access to affordable high-speed connectivity—and address them. We recently aggregated the data submitted in the E-rate modernization proceeding into two maps that allow users to view the percentage of public schools with fiber connectivity at the district-wide level and the number of annual visits to the library system. In order to assist states in identifying the gaps in their high-speed connectivity and compare their success at closing those gaps with other states, we will maintain and continue to update those maps through at least the next three funding years. Furthermore, consistent with the reporting and transparency provisions we adopted in the E-rate Modernization Order, we will work to populate the maps with more detailed information based on the E-rate applications received beginning in funding year 2015.

52. In recognition of the unique government-to-government relationship of Tribal nations to our federal government, and the challenges that Tribal nations face in obtaining broadband for their schools and libraries, we will match funding for construction of high-speed connections for Tribal schools and libraries from states, Tribal governments, or other federal agencies. Schools operated by or receiving funding from the Bureau of Indian Education and schools operated by Tribal Nations will also be eligible to receive matched funds from these additional sources. Eligible libraries that are funded by or operated by Tribal governments will also be eligible for these additional sources of matched funds. As with non-Tribal schools and libraries, we will provide an additional match of up to 10 percent for high-speed connection construction that meets our E-rate connectivity targets.

53. A few commenters have expressed concern that by allowing this limited matching program, some applicants will not be required to pay for any portion of the special construction charges eligible for such a match, and that requiring applicants to pay their non-discounted share is an important safeguard in the E-rate program. We decline to require that some portion of the non-discount share be paid by the E-rate applicant when the state government, or where applicable another federal agency or

tribal government is willing to pay some or all of the applicant's non-discount share of special construction charges. Our current rules already allow for state agencies to pay the full amount of an applicant's non-discounted share of E-rate supported services, and therefore the matching program does not create additional concerns in this regard. To the extent that another governmental entity pays a portion of the cost of the E-rate supported service, that entity will have an incentive to ensure that the applicant engages in cost effective purchasing. However, as with the other options we adopt to increase broadband connectivity to schools and libraries, we also establish some limitations to safeguard the E-rate program. First, to ensure that this funding promotes adequate connectivity, only projects that provide broadband that meets the capacity goals and measures that we adopted in the E-rate Modernization Order will be eligible for the matching funding. In addition, to prevent excessive or duplicative funding during a high-speed broadband connection's useful life, any school or library connection that is built with matching funds will be ineligible to receive additional matching funds for special construction to the same buildings from the E-rate program for 15 years.

**C. Ensuring Affordable Broadband Service to Schools and Libraries in High-Cost Areas (WC Docket No. 10-90)**

54. To ensure that schools and libraries have access to affordable broadband service in high-cost areas, we establish an obligation for recipients of high-cost support to offer broadband service in response to a posted FCC Form 470 to eligible schools and libraries at rates reasonably comparable to rates charged to schools and libraries in urban areas for similar services. We agree with commenters that such an obligation will assist us in narrowing the connectivity gap between rural and urban schools and libraries and help rural schools and libraries achieve the connectivity targets we adopted in the E-rate Modernization Order.

55. In the USF/ICC Transformation Order, 76 FR 73829, Nov. 29, 2011, the Commission unanimously stated its expectation that eligible telecommunications carriers would offer broadband to community anchor institutions in rural and high-cost areas at speeds greater than the minimum broadband performance standards. The Commission further stated its expectation that eligible telecommunications



carriers would provide such offerings “at rates that are reasonably comparable to comparable offerings to community anchor institutions in urban areas.” In the April 2014 Connect America Order and FNPRM, 79 FR 39163, July 9, 2014, we sought comment on how best to ensure that this expectation is fulfilled. Having developed a more fulsome record on this issue, we conclude that establishing a defined obligation for recipients of high-cost support to offer broadband service at affordable rates to requesting schools and libraries is the most effective way to ensure that this expectation is fulfilled for schools and libraries, and thereby ensure that the high-cost program is working in harmony with the E-rate program.

56. There is record support from stakeholders representing schools and carriers for obligating high-cost recipients to offer broadband services to schools and libraries. For example, the Schools, Health & Libraries Broadband (SHLB) Coalition and the State E-rate Coordinators Alliance (SECA) recommend “that recipients of Connect America Fund funding should be required to serve anchor institutions with high-speed bandwidth as a condition of receiving funding.” Similarly, a group comprised of rural carrier associations, including NTCA – The Rural Broadband Association and WTA – Advocates for Rural Broadband, supports a “requirement that any USF/CAF recipient offer [broadband] services . . . to most, if not all, anchor institutions in the supported areas.” Other commenters urge the Commission to ensure that the high-cost program brings affordable broadband services to schools and libraries in rural areas.

57. Imposing an obligation on recipients of high-cost support to offer affordable high-speed services in response to a posted FCC Form 470 to schools and libraries also makes the most efficient use of limited universal service support while ensuring affordable access to broadband service to eligible schools and libraries. In high-cost, hard to serve areas, we expect that recipients of high-cost support will be best situated to offer affordable broadband service to eligible school and libraries. Obligating these recipients to offer affordable services to schools and libraries in high-cost areas increases the likelihood that schools and libraries will receive affordable broadband service at the lowest cost to the E-rate program. At the same time, this obligation decreases the likelihood that limited E-rate support will be

spent to overbuild the networks of high-cost recipients in some rural and high-cost areas while schools and libraries in other high-cost areas remain unconnected.

58. We are not persuaded by those commenters that argue against any obligation to offer broadband services to anchor institutions. For example, USTelecom argues that the obligation to provide service should not apply when additional construction is required to connect an anchor institution. We conclude, however, that eligible telecommunications carriers (ETCs) subject to this obligation remain free to charge reasonable special construction charges to schools and libraries, and those schools and libraries, in turn, will be able to receive support for those charges through the E-rate program. Consequently, there is no reason that this obligation should not apply in those instances when additional construction is required to connect a school or library. While we allow special construction charges to be funded by the E-rate program, those charges would be limited to what is necessary to provide the additional capacity to the requesting school and library from existing fiber backhaul in the vicinity of the school or library: essentially, the incremental cost of a spur to serve the school or library. Price cap carriers that elect to make a state-level commitment for Connect America Phase II model-based support will be required to report annually the geocoded locations where service is newly available, so we will be able to identify where service meeting our targets should be available for schools and libraries.

59. We also are not persuaded by the Utilities Telecom Council argument that the Commission should refrain from adopting set standards for anchor institutions until more data is available and the need for support for anchor institutions is better understood. The Commission expressly established a performance goal of ensuring universal availability of broadband for anchor institutions in the USF/ICC Transformation Order. With respect to schools and libraries, the Commission already has adopted defined connectivity targets for schools and libraries based on comments in the record. Our action to impose this obligation on high-cost recipients is designed to ensure that the high-cost and E-rate programs work effectively together. We therefore are not persuaded by ADTRAN's argument that we should rely only on the E-rate program to ensure increased bandwidth and relative affordability for anchor institutions. Our record indicates that more needs to be done to close the connectivity gap so that schools

and libraries in rural, high-cost areas can meet our connectivity goals. We conclude that obligating recipients of high-cost support to offer broadband services in response to a posted FCC Form 470 to eligible schools and libraries at affordable rates is an economically efficient method for us to fulfill the universal service mandate and meet our connectivity goals.

60. Under the obligation we establish here, high-cost recipients will be obligated to bid on category one telecommunications and Internet access services in response to the posting of an FCC Form 470 requesting such services for eligible schools and libraries located in the areas where the carrier is receiving high-cost support. Further, to ensure that schools and libraries in rural and high-cost areas receive reasonably comparable services at rates reasonably comparable to those services paid by libraries and schools in urban areas, we also take steps to establish reasonably comparable benchmarks for broadband services offered to schools and libraries by high-cost recipients.

61. Applicability. This obligation to offer broadband service in response to a posted FCC Form 470 to schools and libraries will apply to all recipients of high-cost support that are subject to broadband performance obligations to serve fixed locations – specifically, rate-of-return carriers that receive support from the high-cost program, price cap carriers that elect to make a state-level commitment for Connect America Phase II model-based support, price cap carriers serving the non-contiguous United States that elect to receive frozen support in lieu of model-based support for Phase II, and competitive bidders that are awarded support in the Connect America Fund Phase II competitive bidding process. As a condition of receiving high-cost support, carriers receiving high-cost support must submit bids in response to the posting of an FCC Form 470 requesting broadband service to an eligible school, library or consortia located in the geographic area where the carrier receives high-cost support. The obligation to bid on broadband service in response to a posted FCC Form 470 extends only to those schools, libraries and consortia that are eligible for participation in the E-rate program and that seek bids on category one broadband services in a given funding year by posting an FCC Form 470. The Bureau may refer any carrier that refuses to bid in response to a request from an eligible school or library to provide category

one services at rates reasonably comparable to those paid by libraries and schools in urban areas to the Enforcement Bureau for further action as appropriate.

62. Minimum Levels of Service. We require high-cost support recipients to offer high-speed broadband connections sufficient to meet the targets set forth in the E-rate Modernization Order, when requested by schools and libraries in a posted FCC Form 470. Consistent with the approach established for the Connect America Fund, we emphasize that providers remain free to offer a range of service offerings to meet the needs of their customer base, in addition to the service offering meeting the minimums we established in the E-rate Modernization Order. Eligible schools and libraries remain free to request and purchase the services that meet their specific needs. Our intention here is to create a framework that will enable schools and libraries to have access to services meeting the E-rate program's connectivity targets at affordable rates.

63. Timing. This obligation to offer broadband services in response to a posted FCC Form 470 to eligible schools and libraries for price cap carriers that elect to make a state-level commitment for Connect America Phase II model support, price cap carriers serving the non-contiguous United States that elect to receive frozen support in lieu of model-based support for Phase II, and existing rate-of-return carrier ETCs will become effective no sooner than E-rate funding year 2016, which commences July 1, 2016. For ETCs that are awarded Phase II support through a competitive bidding process, this obligation will become effective in the first E-rate funding year after their support is authorized. We recognize, however, that it may not be possible to offer service meeting the E-rate modernization connectivity targets as soon as this obligation becomes effective in geographic areas that do not yet have the necessary fiber backhaul facilities. In the Connect America Order we adopt today, we establish graduated interim milestones for price cap carriers accepting the offer of Phase II model-based support, with the first enforceable interim deadline at the end of calendar year 2017 and completion of deployment not required until December 31, 2020. We recognize that construction to extend fiber deeper into networks to meet Phase II obligations will be an ongoing project over the course of the Phase II term for price cap carriers accepting the state-level commitment. It is likely, therefore, that Phase II construction to extend fiber

facilities to the general vicinity of a particular school or library seeking more robust capacity through the E-rate program will not occur until 2017 or later. We do not intend to disrupt the orderly implementation of the construction cycle for Connect America Phase II. To the extent additional network construction is necessary to reach a requesting school or library, we encourage high-cost recipients expeditiously to complete deployment of facilities and ensure the necessary fiber backhaul is installed where needed.

64. We will continue to provide a more flexible approach to rate-of-return carriers, which are obligated to extend broadband service upon reasonable request for service and within a reasonable amount of time. Consistent with the framework established in the April 2014 Connect America Fund Order, a request to serve would be deemed reasonable to the extent anticipated revenues (both end user revenues and other federal and state universal service support under existing rules) are sufficient to cover the incremental cost of extending service to the requesting school or library. If the available revenues are insufficient, then a request would not be deemed reasonable. To the extent any high-cost recipient has the facilities in place to provide service at the requisite speeds to an eligible school or library in geographic areas where it receives funding, we expect such carrier to offer such service in response to a request from such school or library in the funding year that the request is made.

65. Reasonable Comparability Benchmarks. To ensure that schools and libraries are able to purchase broadband offerings at rates that are reasonably comparable to similar offerings to schools and libraries in urban areas, we direct the Bureau to develop national benchmarks for broadband services offered to schools and libraries. Offering services in response to a posted FCC Form 470 at the reasonable comparability benchmarks will be a condition of receiving high-cost support for those ETCs subject to this obligation, and will not constitute a rebate to the price of service. The benchmark price offered will constitute the full retail price before taking into account any universal service support.

66. The April 2014 Connect America Order and FNPRM sought comment on how best to ensure that we fulfill the expectation that schools and libraries are able to purchase broadband offerings at rates that are reasonably comparable to similar offerings to schools and libraries in urban areas. The Bureau should build upon this record by seeking more focused comment on proposed benchmarks.

Specifically, the Bureau should rely upon data obtained from FCC Forms 471 submitted by urban schools, libraries, and consortia to develop these reasonable comparability benchmarks, as well as any other publicly available data sources, and should provide an opportunity for public comment on its proposed methodology and benchmarks before adopting the benchmarks. Upon adoption of such benchmarks, recipients of high-cost support subject to an obligation to provide fixed broadband will be obligated to offer services at or below these benchmarks in response to the posting of an FCC Form 470 requesting broadband service to an eligible school or library in the geographic areas where the carrier receives high-cost support for the next funding year. The Bureau should use a similar methodology to prepare benchmarks in subsequent funding years.

67. We also believe that this approach will ensure that support to those ETCs required to offer the benchmarked rates will continue to be sufficient for purposes of section 254. While we recognize that capital costs are higher in high-cost areas, no commenters suggest that recurring operating costs are significantly higher in high-cost areas than compared to urban areas. Because E-rate applicants can seek support for special construction charges, as that term is used in the E-rate context, ETCs subject to the benchmark requirements will be able to assess reasonable special construction charges to schools and libraries that solicit bids for broadband services. Moreover, the national benchmarks developed by the Bureau will be reasonably comparable, but not identical, to rates charged for similar offerings to schools and libraries in urban areas. The combination of the availability of special construction charges and reasonable comparability benchmarks will ensure that universal service support received by ETCs remains sufficient for purposes of section 254.

68. Tariffed Services. Those carriers that offer broadband services pursuant to tariffs must comply with our tariffing rules implemented pursuant to sections 201 through 203 of the Act. The benchmark rates established pursuant to this Order for broadband services provided to schools and libraries will likely vary from rates charged for similar services to other customers. To the extent this is the case, we evaluate whether it potentially raises concerns under section 202(a), which forbids “unreasonable discrimination” in rates charged to customers, and section 201(b), which requires rates to

be “just and reasonable,” as well as our tariffing rules. For the reasons described below, we conclude that the action we take today does not raise such concerns.

69. To ensure that incumbent local exchange carriers can offer services to schools and libraries consistent with the requirements of this Order and the Act, we rely on the flexibility provided under section 201(b) to decide that it is just and reasonable for carriers to provide broadband services at rates specific to the class of educational customers to which carriers must offer benchmarked rates. Section 201(b) provides that “communications by wire or radio subject to this chapter may be classified into day, night, repeated, unrepeated, letter, commercial, press, Government, and such other classes as the Commission may decide to be just and reasonable, and different charges may be made for the different classes of communications.” Accordingly, in conjunction with the process for establishing the benchmark rates, we delineate here, pursuant to section 201(b) of the Act, a class of educational customers to whom the benchmarked rates may be offered. We delegate authority to the Bureau to provide other guidelines as necessary to implement the objectives described above as part of the process of seeking public comment on the analysis underlying the rate benchmarks. For example, the Bureau may consider establishing streamlined procedures to enable those carriers that offer broadband services pursuant to tariffs to easily revise or re-file new interstate tariffs. Additionally, the Bureau should determine whether there may be certain carriers for whom application of the rate benchmarks would be impracticable or unduly burdensome and, if so, if there are alternate methods to ensure that such carriers are providing eligible E-rate applicants with rates that are reasonably comparable to similar offerings to schools and libraries in urban areas.

70. We find that it is just and reasonable under section 201(b) for carriers to provide service at rates specific to the class of educational customers to which carriers must offer benchmarked rates. This action furthers significant universal service principles that schools and libraries obtain access to advanced telecommunications services and access to telecommunications services and information services at rates that are reasonably comparable to those charged for similar services in urban areas. By making a benchmarked rate available to eligible schools and libraries, in high-cost areas we will ensure

that the universal service program complies with these statutory goals, as well as the Commission's stated expectation that eligible telecommunications carriers provide broadband to community anchor institutions at reasonably comparable rates. Based on the record, we proceed incrementally, focusing for now specifically on schools and libraries rather than on broader categories of entities within the scope of section 254's objectives. By requiring carriers to offer services at rates specific to schools and libraries, we will advance the objectives of section 254; that fact, coupled with the flexibility afforded the Commission under the "just and reasonable" standard of section 201(b), persuades us that carriers' provision of service at rates specific to schools and libraries is not at odds with section 201(b). We conclude for the same reasons that carriers' compliance with the requirements adopted here do not violate section 202(a).

### **III. ADJUSTING THE E-RATE CAP TO MEET THE PROGRAM'S CONNECTIVITY GOALS (WC DOCKET 13-184)**

71. Ensuring that schools and libraries will be able to meet the high-speed connectivity targets we have set for the E-rate program will require a combination of continued efforts to lower the prices paid for school and library broadband connectivity and an increase in E-rate support necessary to meet growing bandwidth demands of schools and libraries. In this Order and in the E-rate Modernization Order, we have taken several steps to maximize the cost-effectiveness of E-rate supported purchases, including a pricing transparency requirement and several program changes in this Order that will have the effect of increasing competitive options, and thus lowering prices, for schools and libraries to meet their connectivity needs. However, the record demonstrates that as more schools and libraries upgrade their broadband infrastructure and expand robust Wi-Fi access into every classroom and library space, bandwidth demands of schools and libraries will outpace any expected savings that can be accomplished through program efficiencies and declining per megabit pricing. Even with a more efficient E-rate program that achieves substantial cost-savings, funding above the current E-rate cap will be necessary if we seek to connect more schools and libraries at the targeted bandwidth levels. Based on an extensive record that includes more than 2,800 comments, 600 ex parte presentations, and two cost estimates, we



raise the annual E-rate program cap to \$3.9 billion in funding year 2015. Commenters stress the importance of providing certainty to schools and libraries that sufficient funding will be available for both connectivity to and within schools and libraries. For the reasons explained below, we agree that raising the cap, in conjunction with the other work we have done to improve E-rate purchasing, is the best way to provide such certainty as well as to meet the goals we have set for the program.

72. The E-rate funding cap has gone virtually unchanged for 17 years. In 1997, the Commission adopted a \$2.25 billion annual funding cap for the E-rate program, based on demand estimates provided by McKinsey, Rothstein Thesis, and the National Commission on Library and Information Science (NCLIS) Report. Since then, however, actual demand for E-rate support has exceeded that cap in all but one funding year. In recent funding years, there has been little or no funding available for the internal connections necessary to deliver broadband into classrooms and libraries.

73. Throughout the program's history, the Commission has made various efforts to spread E-rate dollars to more applicants, such as, for example, by limiting applicants to applying for discounts on internal connections to twice every five years. In 2010, it also began adjusting the E-rate cap to account for annual inflation to try to gradually align the program's needs with available funding. Even with these changes, the program, while successful, was falling short of its potential. Based on the record created in response to the E-rate Modernization NPRM, earlier this year we took steps to restructure the E-rate program. In the E-rate Modernization Order, we phased out support for outdated, non-broadband services, shifting the focus to high-speed broadband, with a particular focus on how the E-rate program distributes funding for internal connections. We also made needed reforms to encourage cost-effective purchasing, including setting sufficient budgets for internal connections, known as category two services, and establishing pricing transparency. These major policy changes were a necessary first step on the path to ensuring that the program has the necessary resources to meet the goals we have adopted for the E-rate program.

74. At the same time, we sought comment on the future funding levels needed for the E-rate program in order to meet the established goals. We invited stakeholders to submit data on the gap

between schools' and libraries' current connectivity and the specific targets set out in the Order, as well as information on how much funding would be needed to bridge that gap within the E-rate program. In August, the Bureau released a Staff Report summarizing a portion of the large amount of data gathered in the record in order to assist parties considering responses to the E-rate Modernization FNPRM, 79 FR 49036, August 19, 2014. In conjunction with the Staff Report, Commission staff released two maps providing a visualization of the fiber connectivity to schools and libraries based on data in the record, and have continued to update those maps to reflect additional data stakeholders have submitted.

75. Based on the substantial record developed in this proceeding, in this section we set out the anticipated costs to meet the goal of ensuring affordable access to high-speed broadband sufficient to support digital learning in schools and robust connectivity for all libraries. First, in order to provide certainty and administrative simplicity to applicants and to the Fund, we extend for three additional years, with a small modification, the category two budget approach we adopted in the E-rate Modernization Order for funding costs for internal connections for schools and libraries. Taking this change into account, we set out the projected costs of category two services to the E-rate program over the next five funding years. Next, we discuss the factors that will impact the cost of category one services in order to ensure schools and libraries can meet the connectivity targets we adopted in the E-rate Modernization Order. Based on these projections, and to help provide more certainty regarding the availability of E-rate support, we raise the annual E-rate cap to \$3.9 billion beginning in funding year 2015. Setting the cap at this level is based on a substantial amount of data and analysis and reflects our judgment of the amount of funding that will be necessary to meet the long-term broadband connectivity targets for all schools and libraries, including internal connections, non-recurring infrastructure upgrades, and significant increases in monthly recurring Internet access charges.

**A. Ensuring Certainty for Applicants Seeking Support for Category Two Services**

76. Schools. First, we agree with those commenters that stress the importance of predictability and certainty by extending the applicant budgets for schools established in the E-rate Modernization Order for category two services. In July, we adopted a two-year test period for the pre-

discount applicant budgets for category two services for funding years 2015 and 2016. Applicants that receive commitments for category two support in either of those funding years will be subject to the five-year budget. To make the test period for the budget-based approach to awarding category two support consistent with the full five-year cycle that such budgets are based on, we expand the test-period for three additional years through funding year 2019.

77. In the E-rate Modernization Order, we explained that we were confident that we could meet the \$1 billion target for two years. However, we noted that the longer-term funding available for category two budgets is linked to the broader question of the long-term funding needs of the E-rate program, and we sought comment on these funding needs of the program. As the record demonstrates, without the changes that we make today, applicants who do not seek or receive category two support in funding years 2015 or 2016 would face uncertainty about whether they will be able to receive E-rate support to meet the Wi-Fi needs of their students and patrons in later years. By addressing the longer-term funding needs of the program and extending these category two budgets for three additional funding years in this Order, we help ensure sufficient funding for category two services, increase certainty for applicants about the availability of funding beyond funding years 2015 and 2016, and simplify the administration for USAC.

78. A sufficiently funded, multi-year budgeted approach for category two funding provides both certainty and flexibility for applicants. This combination allows applicants to request support only for what they need when they need it, rather than seek funding for unnecessary components out of fear that there will not be support in the next funding year. It also helps us achieve our goal of ensuring affordable access to high-speed connectivity within schools and libraries, by providing broader and more equitable support for the internal connections necessary to support digital learning.

79. Some commenters argue the per-student budgets should be discontinued and replaced with a funding cap increase alone. We disagree and restate our firm belief that raising the funding cap alone will not ensure that schools and libraries can purchase affordable internal connections. Raising the cap without any additional policies or limits on how the program funds internal connections does not

address the challenges faced by applicants created by widely variable costs for similar services, inefficient network planning, or incentives at the top discount levels of the E-rate program to engage in wasteful purchasing. We also firmly disagree with the assertion that per-student budgets provide “[t]oo little discount funding” to all applicants and are inequitable. These budgets maintain the program’s historic focus on the highest poverty schools and libraries by continuing to use concentrations of poverty to determine the discount level available and the priority of applicants. At the same time, the five-year budgets promote cost-effective spending by focusing E-rate dollars on the internal connections that are essential for wireless networks, and therefore, allow us to provide a sufficient and predictable amount to deploy Wi-Fi to students and library patrons throughout the nation, and not just to the applicants at the highest discount levels.

80. We reaffirm the \$150 per student pre-discount budget, with a \$9,200 pre-discount funding floor, as a reasonable limit on the amount of E-rate discounts available to schools, consistent with data in the record showing local area networks (LAN) and wireless LAN (WLAN) deployments in classrooms across a number of school districts across varied geographies. In conjunction with other measures taken in the E-rate Modernization Order, such as pricing transparency to help arm applicants with information to make smart purchasing decisions and lowering the maximum discount rate from 90 to 85 percent to encourage applicants to pursue the most cost-effective options, this \$150 per student budget provides a sufficient amount of support for the necessary internal connections. Some applicants urge us to recognize that the internal connections needs of schools are not uniform. While the E-rate Modernization Order recognized that there are different construction materials or variations in labor costs, the majority of costs for LANs are for commodity equipment, which sees nationwide pricing and competitive markets. We again decline to set out separate budgets for schools in different situations, apart from the adjustments for poverty and rurality that our system of discounts already provides. We expect the Bureau to closely monitor these budget levels as described below.

81. We take this opportunity to revisit the issue of how schools should count students that attend multiple schools. Consistent with our desire to ensure sufficient funding for the number of

students using the internal connections at a school, in the E-rate Modernization Order we explained that “[s]tudents who attend multiple schools... may be counted be both schools in order to ensure appropriate LAN/WLAN deployment for both schools.” We now clarify that schools should include in their student count, for purposes of calculating category two budgets, students that attend part-time only when doing so regularly increases the maximum number of students on the school premises at the same time, during the school day. This means that students who attend a virtual class that originates at a school, but who are not on the school premises cannot be counted in that school’s student count. We also note that students attending after-school activities or after-school events cannot be included in the student counts. Schools should also be prepared to demonstrate their student count calculations during PIA review and if they count part-time students to demonstrate how those students regularly increase the maximum number of students on the school premises at the same time during the school day.

82. Libraries. We also extend for three additional funding years, with a small upwards adjustment for libraries in more urbanized areas, the pre-discount budget for libraries that we adopted for funding years 2015 and 2016 in the E-rate Modernization Order. We adopted a \$2.30 per square foot pre-discount budget for libraries in that Order, with a funding floor of \$9,200, representing a reasonable pre-discount budget level, consistent with data submitted into the record prior to its adoption. Having sought further comment specifically on the issue of user density in urban libraries because “the record of library funding needs for internal connections [was] not as robust as we would like,” we now adopt a separate budget of \$5.00 per square foot for libraries located in cities and urbanized areas with a population of 250,000 or more, as identified by the Institute of Museum and Library Services (IMLS) locale codes of 11, 12, and 21.

83. Calculating the library budget based on square footage continues to provide the E-rate program a simple, fast, and efficient mechanism for libraries and USAC, consistent with the Commission’s third goal for the program. There is broad support in the record for the position that the library budget should be greater for urban libraries, because these libraries serve more people per square foot than other communities and Wi-Fi performance may be impacted by a high density of users at one

time. There is also support in the record for considering the number of users or connected devices when setting the category two library budget, particularly for large urban libraries. We agree that usage density may increase the cost of internal connections. However, as the record indicates, there is not a standardly reported metric on the number of Wi-Fi users in libraries that would provide a simple and predictable formula for all libraries. We therefore decline to adopt the proposals that seek a different budget calculation based on daily visitors or public computer users, because using those metrics would impose new administrative burdens on libraries, would be difficult to administer, could improperly incent purchasing unnecessary public computers, and would delay application review by being difficult to verify. Square footage continues to present the best option for providing a sufficient budget for libraries that is simple for applicants to calculate and simple for USAC to administer.

84. Because we agree that usage density increases the cost of internal connections and the record supports a decision that usage density is greater in large urban libraries, we elect to increase the pre-discount per-square foot library budget for libraries in the most densely populated areas to \$5.00 per square foot over five years. The Urban Libraries Council (ULC) suggests a category two pre-discount budget of between \$5.00 and \$7.00 per square foot for urban libraries, a number of other commenters support an increase to at least \$4.00 per square foot. We take into account this range of estimates that have been submitted into the record, along with the lack of precise evidence that would militate in favor of picking a specific estimate. As such, in order to be fiscally cautious, we adopt a value toward the bottom end of the range of \$5.00 per square foot as the pre-discount budget for the most urban libraries.

85. To determine which libraries get the benefit of the increased per-square-foot budget, we look to the IMLS classification of libraries. IMLS assigns locale codes in order to identify the type of geographic areas in which a library outlet is located, using the same methodology as the National Center for Education Statistics' Common Core of Data datasets. It divides geographic areas into four categories – city, suburban, town, and rural, each with three subcategories. We agree with ULC's recommendation that we provide higher funding per square foot for those libraries located in the most densely populated areas using the IMLS locale codes of "11 – City, Large," "12 – City, Midsize," and "21 – Suburb, Large."

These three locale codes capture urbanized areas within principal cities with a population over 100,000 and those areas outside of a principal city, but within an urbanized area with a population of over 250,000, which are the most densely populated areas. These locale codes therefore provide a reasonable proxy for identifying libraries that may see a higher density of users per square foot. As described below, the Bureau will continue to evaluate these library budgets for category two services. We also take this opportunity to remind library applicants, regardless of their category two budget levels or square footage, of the obligation to select the most cost-effective service offered and to consider price as the primary factor.

86. Our decision to extend both of these five-year pre-discount budgets for schools and libraries by three additional funding years reflects our concern that using applicant budgets for only two funding years will be inadequate to provide certainty for applicants making purchasing decisions. Additionally, it reflects our finding that these budgets are sufficient and that extending them will simplify the administration of the program and provide clarity and certainty to schools and libraries. We agree with commenters that extending the applicant five-year budgets will increase certainty about how applicants and certain services will be treated beyond funding year 2016 and whether funding will be available. We are particularly concerned that applicants could decide to delay seeking funding for needed internal connections in funding years 2015 or 2016 because they would like to see if there is additional funding in funding year 2017. Further, this extension simplifies administration of the program for both applicants and USAC by treating all applicants the same, regardless of when they receive E-rate support for category two services.

87. To ensure that the applicant budget remains effective at accomplishing our goal of ensuring affordable access to high-speed broadband sufficient to support digital learning, we expect the Bureau to monitor these applicant budgets and provide a report on their sufficiency to the Commission before the opening of the filing window for funding year 2019. This analysis is important for two reasons. First, information demonstrating the success, or lack thereof, of this approach to providing support for internal connections will provide the Commission with data to determine if the category two

budget approach should be made permanent. Second, if the Commission does not extend the budget approach beyond funding year 2019, the information learned during the test-period will provide significant information to assist USAC in making sure that category two requests continue to be cost-effective.

88. Therefore, working with OMD and USAC, the Bureau shall analyze the data from applicants for trends across different types of applicants or regions of the nation, particularly those schools that serve students with special education services. This may include evaluation of FCC Form 471 pricing data received from applicants to ensure that cost-effective offers are reaching applicants in all parts of the country. In particular, our record on the costs for urban libraries that see higher density bandwidth demands is not as robust as our other data. Therefore, as part of our existing direction to seek feedback on sufficiency of LAN/WLAN capacity, we also direct the Bureau to analyze the applicant requests from funding years 2015 through 2018 for libraries serving different population sizes, so that we have information needed to assess whether the category two library budget is reasonable. The Bureau may consider including in its analysis passive data measurements in order to measure the impact of the number of users on the Wi-Fi deployments.

89. Basic Maintenance, Managed Wi-Fi, and Caching. Because we extend these category two applicant budgets, we also extend the eligibility for basic maintenance, managed internal broadband services, and caching through funding year 2019. These services provide benefits to applicants seeking flexibility in how to set up their networks, but we had concerns about how to prevent unnecessary or wasteful spending especially given that many managed Wi-Fi agreements run over multiple years. The applicant budgets continue to “mitigate some of our concerns about waste or abuse” as long as they are in effect. We direct the Bureau to include these eligible services on the Eligible Services List accordingly in funding years 2016 through 2019.

90. We also note commenters’ concern that caching services and managed Wi-Fi are additional costs for category two services not accounted for in the budgets. We extend the eligibility of these services in order to provide additional choices for applicants seeking the most cost-effective



technology options for their unique situations. For instance, a small school district or library system without a technology director may find managed Wi-Fi allows it to more quickly deploy advanced LANs by spreading its costs over a multi-year contract and relying on the technical expertise of the managed Wi-Fi provider. Similarly, a school may decide that it makes sense to incorporate caching into its connectivity plans and wants to seek E-rate support for those services. These services, however, are not essential components for all applicants seeking to deploy Wi-Fi, and we therefore do not further increase the applicant budgets to account for them.

91. Category Two Costs. We find that the \$1 billion annual target budget set for category two services in the E-rate Modernization Order is sufficient to provide the E-rate support needed for a five-year deployment of LANs and WLANs. In July, we stated that the question of available funds for these five-year budgets was closely linked with the long-term funding for the E-rate program. We therefore applied the five-year budgets to applicants that received E-rate support for category two services in funding years 2015 and/or 2016, pending resolution of the program's overall funding needs. Having now extended these category two applicant budgets for all applicants for three additional funding years, we reaffirm the funding level for the E-rate support for category two budgets, based on the analysis set out in the E-rate Modernization Order. We also index the category two budget target and the applicant budgets to inflation.

92. This \$1 billion annual target for category two services provides greater access to E-rate support for both schools and libraries. From funding years 2008 through 2012, the program provided E-rate discounts for internal connections of between \$700 million and \$1.2 billion. However, this funding provided support for less than 11 percent of the more than 100,000 schools participating in the program each year and less than four percent of public libraries. With the adoption of pre-discount budgets sufficient to deploy LANs and WLANs and a \$1 billion target, the program will be able to support an average of 10 million students each funding year at different discount levels, providing broader and more equitable support across the nation. Additionally, targeting a consistent amount of support each year

allows us to reduce fluctuations in the contribution factor and uncertainty over availability of funding that had previously existed in the E-rate program.

93. Although some commenters express concern that \$5 billion in category two support over five years is insufficient to reach the schools and libraries at the lowest discount levels, we restate our finding that the funding target will provide sufficient funding to applicants seeking category two support. First, we disagree with assertions from commenters that the EducationSuperHighway/CoSN Ongoing Cost Model's \$1.6 billion in annual costs for category two services is the appropriate measure. That model was one of several data points used in determining the category two budgets for schools. In particular, commenters point to analysis done by Funds for Learning that assumes all applicants will apply and all applicants will request the entirety of their budgets each year. We disagree with these assumptions. In the E-rate Modernization Order, we noted that some schools and libraries will not seek funding and others will seek less than the full budgeted amount. Additionally, the average size of the requests per student in the lower discount levels is well below \$150 per student, and we do not expect a dramatic increase in the size of requests per student from such applicants. We note, as one example, that data in the record showed managed Wi-Fi contracts for as low as \$19 per student annually, which is less than 65 percent of the available budget over five years.

94. We recognize that there is pent up demand and that applicants may seek a larger portion of the budget early on in the five-year cycle, leaving applicants at the lower discount levels with some uncertainty about future funding. However, by extending applicant budgets for three more funding years and increasing the size of the E-rate cap to help meet both category one and category two demand below, we provide much-needed certainty to applicants, allowing them to take advantage of the flexibility the five year budgets offer. Indeed, providing needed flexibility is one of the benefits of these multi-year budgets. School districts with a large number of schools may simply be unable to deploy networks in every school for a number of reasons, including their own budget match and the ability of a vendor to install to every school. Similarly, applicants that request support for a managed Wi-Fi solution may end up requesting just a portion of their budget each of the five funding years, leaving additional funding for

applicants at a lower discount level. For these reasons, we expect category two applicant requests to be reasonable and that the Bureau will monitor these budgets closely.

## **B. Meeting Applicants' Needs for Category One Support**

95. Having set an annual category two budget target of \$1 billion, we now turn our focus to determining how meeting the long-term broadband connectivity targets that we set in the E-rate Modernization Order will drive future funding needs for category one services. The record demonstrates that growth in demand for category one funding will be driven by a combination of: (i) requests for support for non-recurring infrastructure upgrades; and (ii) the growing demand for high speed bandwidth connectivity to schools and libraries, both of which will lead to increasing monthly recurring charges for WAN and Internet connections. The increase in monthly recurring charges for WAN and Internet connectivity will come from schools and libraries that already have connections capable of meeting E-rate connectivity targets and from those that are newly able to purchase high-speed connections as a result of the changes to the E-rate program that we adopt today. Moreover, by targeting funding to Wi-Fi in the E-rate Modernization Order and extending the budgets for internal broadband connections in this Order, we will ensure that more schools and libraries have robust internal connections, which will fuel their demand for high-speed WAN and Internet connectivity. Taking into account data in the record and the anticipated savings from steps we have taken to refocus E-rate funding on broadband and encourage program efficiencies, we discuss these increasing costs for category one services below.

### **1. Projecting Schools' and Libraries' Future Connectivity Demands**

96. We first evaluate the future connectivity demands of schools and libraries, both in terms of their needs for new infrastructure and their needs for services provided over that infrastructure. On the one hand, stakeholders report that prices per megabit for high-speed broadband have consistently declined each year. At the same time, as demonstrated below, increases in bandwidth demand greatly offset this decline in per megabit pricing; thus, the total amounts paid by schools and libraries for their recurring monthly broadband services will continue to increase. Indeed, in a recent survey of school district administrators and school technology leaders conducted by CoSN, many schools signaled that they would

need more bandwidth in the very near future. For example, 83 percent of respondents expect to need additional bandwidth over the next three years and almost two-thirds report that they do not have sufficient bandwidth for the next 18 months. Moreover, the schools' anticipated demand is for significantly greater bandwidth. Over the next 18 months, 25 percent of respondents expect 100 to 500 percent bandwidth growth and another 24 percent expect 20 to 100 percent bandwidth growth.

97. By working to ensure that schools and libraries have access to affordable high-speed broadband connectivity, we also contribute to their increase in demand for those high-speed connections. For example, our commitment to consistently provide at least \$1 billion in funding for school and library Wi-Fi networks will fuel additional usage and demand. As schools and libraries deploy increasingly robust Wi-Fi networks, the ability of more students, teachers and library patrons to use their schools' and libraries' internal networks will require the delivery of greater bandwidth to those schools and libraries. For instance, data from North Carolina demonstrate that some school districts are seeing Internet bandwidth usage growth of nearly 50 percent on an annual basis, regardless of whether the school is implementing a one-to-one device deployment initiative, is several years into such a program, or lacks a specific program. Similar data from Washington indicate that average annual usage growth was over 40 percent from 2009 and 2014.

98. In addition, earlier in this Order we adopt several policy and administrative changes that will provide a range of options to support more applicants' efforts to obtain sufficiently robust broadband connectivity to their buildings. Encouraging schools and libraries to undertake those types of projects and as a result closing the gap between those schools and libraries with high-speed connections and those without will further increase the demand for E-rate support. The extent to which we are able to achieve the first goal that we set out for the E-rate program – ensuring affordable access to high-speed broadband sufficient to support digital learning in schools and robust connectivity for all libraries – is highly dependent on how much category one funding is available for schools and libraries to pay for the upfront deployment costs of scalable connections to currently unserved and underserved schools and libraries. While we take steps above to encourage such deployment, the record clearly demonstrates that the

amount of money needed for such deployment is closely linked to the number of additional schools and libraries that get connected to high-speed broadband.

99. Based on the data in the record, we find that over a third of schools do not have access to fiber to the building, and an even greater percentage of libraries lack high-speed connectivity. While the dataset underlying our calculations on fiber access does not contain connectivity data from every school and every library across the nation, it is an unprecedented and rich source of information about school and library connectivity. Stakeholders have submitted data on existing connectivity since the beginning of this proceeding in the middle of 2013, and in August, Commission staff published the Fiber Connectivity Maps, which continue to be updated with new data. We therefore disagree with commenters that argue that we should wait for additional data on the fiber connectivity gap or that the gap is so small that it does not require additional funding to bridge it. Based on the many sources in the record agreeing that there is a significant connectivity gap to close, this dataset provides a reasonable baseline on which to rely in order to ensure the E-rate cap is set sufficiently high to provide certainty on future availability of funding necessary to achieve long-term connectivity targets.

100. Based on the findings set out above, the record shows the costs for category one services will increase over the next five years as more schools and libraries get access to high-speed connections and bandwidth demand continues to increase. We have an obligation to balance having a specific, predictable, and sufficient support mechanism with our “responsibility to be a prudent guardian of the public’s resources.” Using estimates in the record on the costs for category one recurring and non-recurring costs consistent with our findings above, we balance these two concerns by setting a cap on the E-rate program that provides sufficient certainty of availability of funds over the next five funding years, while limiting the impact on end users in the near-term.

101. Commenters submitted two cost estimates on connectivity to schools and libraries into the record: the ESH/CoSN Connectivity Model and the SHLB Coalition Model. The ESH/CoSN Connectivity Model provides a projection of both recurring and non-recurring costs for public schools to meet the connectivity targets over five years. The model takes into account data on current connectivity,

predicted bandwidth demand growth, declining recurring prices per megabit, and estimated non-recurring prices to close the gap of schools without access to high-speed connectivity. It also accounts for variation in connectivity needs of differently-sized schools. Using these data, it estimates the cost for five different scenarios, projecting differing costs depending on the number of schools that become connected. ESH also filed a supplementary analysis of the recurring costs for private schools and libraries. The SHLB Coalition Model, prepared by CTC Technology & Energy, sets out an estimate of capital expenditures needed to connect fiber to unserved, eligible public schools, private schools, and libraries. Using an engineering-based approach, the model divides the nation into eight different standardized geographies, ranging from dense urban areas to isolated schools in desert areas. Their model then projects a low and a high estimate for non-recurring costs to connect public and private schools in each of these different geographies, and a separate estimate for the costs to connect libraries.

**a. Recurring Costs**

102. We first consider the modeled recurring costs for high-speed connectivity. The ESH/CoSN Connectivity Model addresses recurring costs for public schools, and its analysis is consistent with other evidence in the record. For each of its five funding scenarios, the model accounts for differing bandwidth needs by school district size, service mixes, and pricing. Consistent with the data in the record, it takes into account an annual decline in per megabit pricing of approximately 10 percent and an annual increase in bandwidth demand of up to 50 percent. As a result, it projects an increase in pre-discount recurring costs from approximately \$2.1 billion in funding year 2015 to \$2.8 billion in funding year 2018 for public schools.

103. We next turn to the recurring costs for private schools and for libraries. In a supplemental analysis, ESH estimates that it will cost \$446 million annually in pre-discount recurring costs for private schools by funding year 2018. For libraries, ESH projects \$298 million annually in pre-discount recurring costs based on its pricing assumptions for public schools. Adding these estimates to the public school recurring projection, the sum of the projections for funding year 2018 of total recurring costs rises to \$3.60 billion. We increase this funding year 2018 estimate by nine percent in order to

project costs over the five-year period for which we have set connectivity targets (funding years 2015 to 2019). The resulting projection for recurring pre-discount costs for public schools, private schools, and libraries in funding year 2019 is \$3.92 billion. However, as discussed below, ESH also assumes that policy decisions can drive cost-efficient purchasing which will reduce these pre-discount costs.

104. In addition to recurring costs for high-speed connectivity, there will also be savings of over \$3 billion in the next five years to the E-rate program due to the phase down of voice services. Commenters point out that additional savings are possible. The post-discount costs to the E-rate fund are estimated to decrease from approximately \$450 million in funding year 2015 to approximately \$25 million in funding year 2018. We acknowledge these costs to the program over the next four funding years.

#### **b. Non-Recurring Costs**

105. We next review the estimates in the record of the non-recurring costs, or capital expenditures, that are needed to connect schools and libraries to high-speed broadband meeting the program's connectivity targets over the next five years. The ESH/CoSN Connectivity Model includes an estimate for new builds that are paid for through recurring charges. By doing this, it recognizes that many schools and libraries pay a monthly price that includes both the capital deployment costs and the ongoing operational costs. At the same time, the models provide projections of one-time costs that would be sufficient to close the gap. While there may be applicants or service providers that prefer to include the capital costs as a portion of the annual price for the life of the contract, the ESH/CoSN Connectivity Model provides a way to separate out these capital costs for the schools located in the most expensive areas, where the higher cost of buildout is more likely to require additional special construction charges. The changes we adopt in Section II will provide greater opportunities for applicants and service providers to take advantage of special construction. The ESH/CoSN Connectivity Model demonstrates that the cost to the program increases as a greater percentage of schools get high-speed connections. To connect between 99.7 and 100 percent of public schools with more than 100 students, the ESH/CoSN

Connectivity Model provides a range of non-recurring pre-discount costs of between \$600 and \$810 million annually if divided evenly over the next five funding years.

106. These projections for public schools costs are generally consistent with the cost estimates provided by the SHLB Coalition for both public and private schools. The SHLB Coalition Model provides a low and a high estimate for non-recurring costs for fiber deployment to both public and private schools that would range from \$800 million to \$1.15 billion in pre-discount costs if divided evenly over the next five funding years. It also projects approximately \$135 million annually over five funding years to connect unserved libraries across the country to fiber. The record indicates that a reasonable estimate of non-recurring pre-discount costs for both schools and libraries is between \$935 million and \$1.29 billion annually over five years.

## **2. Driving Down Category One Prices through Efficiencies**

107. We also conclude that recent program changes will result in an additional reduction in the cost to the Fund as applicants have more opportunities to find cost-effective options. We strongly agree with commenters that argue that programmatic change, further streamlining, and continuing efforts to reduce waste, fraud, and abuse, such as greater enforcement of the lowest corresponding price, is needed to produce savings to the E-rate program. While the precise level of savings from cost efficiencies is difficult to predict, there is record support for a finding that they could achieve savings of as much as 10 to 25 percent on the cost of broadband. ESH provides an analysis of the potential impact of several different policy scenarios that each could result in significant pricing efficiencies, such as equalizing the treatment of lit and dark fiber and increasing pricing transparency. Similarly, increased planning and purchasing at the state level has also been shown to result in greater bandwidth at lower per-megabit prices, which is an added benefit of increasing state involvement in the E-rate program by providing a bump in support for infrastructure upgrades where states provide additional support. Because the record demonstrates that our various changes will result in efficiencies lowering program costs, we find it reasonable to assume savings of up to 15 percent of projected demand for category one costs due to our reforms.



**C. Adjusting the E-rate Cap to Provide Certainty of Sufficient Available Funding to Achieve Program Goals**

108. To ensure sufficient funding is available over the next five years to meet our program goals and connectivity targets, we adjust the E-rate cap to \$3.9 billion plus annual inflationary changes. Raising the annual E-rate funding cap to \$3.9 billion will allow us to meet our target of providing at least \$1 billion in category two support annually while fully funding category one demand, consistent with the cost estimates modeled by commenters and partially offset by potential efficiencies. There is wide support in the record for an increase in E-rate funding to help schools and libraries meet the program's connectivity targets, and we find that raising the cap to \$3.9 billion will ensure a specific, sufficient, and predictable level of funding available as schools and libraries seek support for robust Wi-Fi networks within their buildings and seek high-speed connections to their buildings for years to come.

109. In addition to making it possible to close the high-speed connectivity gap, raising the annual cap to \$3.9 billion will provide certainty about the availability of funding for those applicants planning now to purchase high-speed broadband connectivity to schools and libraries. It will also provide certainty about the availability of funds for applicants seeking to take advantage of the changes to category two funding by adjusting the cap in funding year 2015. Commenters are in agreement that there is pent up demand for category two services, and providing more than the \$1 billion target level in support for internal connections will allow more applicants to close their Wi-Fi gaps sooner and more efficiently. The availability of additional funds should allay concerns that applicants below the highest discount bands will not have access to category two funds in the near future. For these two reasons, we also disagree with commenters that urge us to delay adjusting the cap until all program changes have been implemented or more data is available.

110. Raising the annual E-rate cap to \$3.9 billion allows us to provide certainty to the applicant community, allowing local decision-makers to proceed at the pace that best serves their students and patrons. In doing so, we do not expect that program demand will immediately reach that funding level. Indeed, there is no way to perfectly predict what precisely individual schools and libraries will seek

support for or when unserved schools will gather the resources to pay the non-discounted portion of special construction charges. For instance, we have already identified sufficient unspent funds to be confident in funding for category two services in funding years 2015 and 2016, and it will take significant planning and time to take advantage of the measures set out in Section II. However, the record is clear that demand for and costs associated with high-speed broadband services will continue to grow, and we find that raising the cap now to \$3.9 billion will provide needed room for future E-rate funding needs. We balance this cap increase with our efforts to ensure fiscal prudence and we direct USAC to collect program funds based only on actual projected demand rather than collecting the full \$3.9 billion without regard to applicant needs. Providing USAC with this flexibility will allow the Fund to accommodate fluctuations or changes in actual demand in the coming years without over-collection of funds. In order to facilitate this process and consistent with program practice, we amend the rules to only allow applications to be filed within the filing window. We disagree with commenters that argue that we should wait to address long-term funding needs until the Federal State Joint Board makes recommendations on contributions reform. Because demand for category one support will not increase dramatically in the short-term, we do not see a benefit in delaying this change when we have the ability to provide certainty about future availability of funding to schools and libraries making plans about connectivity for the next five years.

111. Additionally, we recognize that end users ultimately bear the cost of supporting universal service, through carrier charges. However, we must balance our need for fiscal prudence with the demonstrated needs of the E-rate program, for which we have a statutory mandate to “establish rules... to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services.” We adopted the program goal of ensuring affordable access to high-speed broadband sufficient to support digital learning in schools and robust connectivity to all libraries recognizing the critical role the E-rate program plays in the lives of students and communities. Having already taken steps to focus support on high-speed broadband and set out measures to increase cost efficiencies, this cap adjustment provides E-rate applicants with the certainty needed to

plan how to increase connectivity to schools and libraries in the most cost-effective manner. Finally, setting a funding level that has sufficient flexibility for these plans should also drive long-term efficiencies in the program.

112. Finally, some commenters recommend that the Commission double the cap, which is currently \$2.4 billion, to meet recent demand. We decline to raise the cap to \$4.8 billion based on recent demand. Since the funding year 2014 application window closed, we have modernized the program to focus support on high-capacity broadband services by eliminating support for legacy services, beginning with the phase out of support for voice services and imposing budget discipline on category two services. Raising the cap based on demand for a differently structured program would not make sense. We find instead that a program cap set using projected costs for the services the program now supports and taking into account efficiencies through recent policy changes is a more appropriate means to measure necessary program size and ensure we exercise fiscal prudence.

#### **IV. ESTABLISHING A PERFORMANCE MANAGEMENT SYSTEM AT USAC TO ADVANCE THE GOALS OF THE E-RATE PROGRAM (WC DOCKET 13-184)**

113. In this section, we direct USAC to develop a robust performance management system to advance the goals we adopted for the E-rate program in the E-rate Modernization Order and to analyze, on an ongoing-basis, the effectiveness of USAC's administration of the E-rate program. Performance management is a process by which entities focus their resources on the achievement of strategic goals and objectives, including by the development of long-term strategic plans and by the rigorous tracking of performance data. As the administrator of the E-rate program, USAC's performance is integral to the success of the program. Moreover, as a result of the transparency requirements we adopted in the E-rate Modernization Order, the improved data collection that will result from that order, and our direction to USAC to modernize its information technology (IT) system, USAC will have access to information that will be crucial in measuring our success toward reaching the E-rate program goals and it is essential that they make information available to schools, libraries, the Commission, and all other stakeholders interested in updates about our progress towards meeting those goals. Therefore, in developing and

implementing its performance management system, we direct USAC to work with staff from OMD and the Bureau to formulate a detailed plan that includes both immediate and long-term metrics directed at finding new ways to further the E-rate program goals.

**A. Components of the Performance Management System**

114. We delegate to the Bureau and OMD oversight of the development and implementation of USAC's performance management system. In addition to directing USAC to develop a performance management system for its administration of the E-rate program, we provide direction on a range of components that USAC must include in the system. At the same time we recognize that USAC's performance management system must be flexible and adaptive, and we expect USAC, in consultation with staff of the Bureau and of OMD, to continue to update its performance management system, as appropriate.

115. Impact of E-rate modernization. In this Order, as we did in the E-rate Modernization Order, we adopt a number of programmatic changes aimed at reaching the goals we adopted for the E-rate program. We have directed USAC, working with Commission staff, to implement those changes. Recognizing that some of those changes will be more successful than others, and that future Commissions will want to be able to evaluate the success of those initiatives, we direct USAC to incorporate in its performance management system an ongoing analysis of the impact of those changes on reaching the goals that we adopted for the E-rate program in the E-rate Modernization Order, as well as USAC's success at implementing those changes.

116. Impact of and further improvements to USAC's updated IT system. USAC's performance management system should also include ongoing evaluation of USAC's success in upgrading its IT system, and moving towards all-electronic filings by E-rate stakeholders and all-electronic notifications by USAC. As we directed in the July E-rate Modernization Order, all applicants must file electronically their applications for E-rate support for this coming funding year. As USAC considers what more it can do to ease the administrative burden on applicants through its upgraded IT

system, it must develop a plan to migrate the filing of all E-rate appeals and invoices to electronic formats, and should make that possible by or before the start of funding year 2017.

117. Simplifying calculation of discount rates. To further streamline the application process, particularly for school districts and library systems, we instruct USAC, as part of its performance management system, to enable applicants to more easily manage the discount calculation process in advance of the application filing window. USAC should establish the appropriate timeframe for billed entities to update their discount information in USAC's online system, as well as a process for billed entities to certify to the accuracy of such information prior to the opening of the application window. USAC's system should then be able to assist applicants in determining their discount rate based on such information, and pre-populate that information based on the information provided by the billed entities. At the same time, we remind applicants that they remain responsible for ensuring that they are seeking the appropriate discount rate and they are responsible for repayment in the event of any error in the calculation of the discount rate whether caused by the applicant or by USAC.

118. Online competitive bidding. In order to assist applicants in maximizing the cost-effectiveness of spending for E-rate supported services, as part of its performance management system, USAC should explore the possibility of providing online tools to improve the competitive bidding process. We agree with commenters who contend that the competitive bidding process should encourage and facilitate participation in the E-rate program by service providers. We therefore direct USAC to work with OMD and the Bureau to determine the feasibility and effectiveness of online tools to assist applicants with the competitive bidding process, including online bid and review tools to assist applicants in obtaining multiple bids and selecting the most cost-effective services, and to reduce administrative costs and burdens associated with competitive bidding. To expose applicants to more purchasing options, USAC should also explore the provision of tools to promote and facilitate increased involvement by service providers, and to provide more visibility into options for purchasing the specific products and services for which applicants are requesting proposals in ways that are consistent with fair and open competitive bidding requirements that are fundamental to the E-rate program.

119. Improving the administrative experience of program participants. As part of its ongoing work to make the E-rate application process and other E-rate processes faster, simpler, and more efficient USAC should assess organizational options for placing greater emphasis on improving the end-to-end administrative experience of program participants, including applications, appeals, invoices, and audits. For example, USAC should assess the value of designating senior management directly responsible to the CEO to be responsible for championing outreach and simplification strategies to benefit program participants and to ensure that as much time, energy, and financial resources as possible go to achieving program goals rather than to cumbersome administrative processes. USAC should also solicit input from program beneficiaries and other stakeholders and use that input in evaluating, on an ongoing basis, its provision of customer support to E-rate applicants. USAC should incorporate performance metrics related to customer service into its overall performance management plan, and work with Commission staff to identify improvement recommendations. These recommendations should be considered at the highest levels of management and given the appropriate consideration for implementation, consistent with appropriate processes for coordination and approval by the Commission of review procedures, and the success of improving the customer service experience should be a key component of USAC's performance management system.

120. Maximizing the cost-effectiveness of E-rate supported purchases. As part of its performance management system, USAC should analyze how its administration of the program can further the goal of maximizing the cost-effectiveness of E-rate supported purchases. For example, USAC should analyze its approach to cost-effectiveness reviews, and find ways to share information with applicants and vendors about its approach to such reviews, in order to encourage cost-effective purchasing by applicants. We direct the Bureau and OMD to oversee USAC's interpretation and application of cost effectiveness to ensure alignment with the program goals we have set, with particular emphasis on ensuring the cost effectiveness of the new methods of supporting category one and category two services provided in the E-rate Modernization Order as well as this Order.

121. USAC should also explore ways to assist schools and libraries in receiving access to

neutral, expert technical assistance. We agree with those commenters who argue that technical assistance is critical to building an efficient internal network. We have heard, however, from many parties that such technical experience is often not available within a school district or library system, especially those located in rural areas. In situations where affordable technical assistance is not available, USAC, as the expert administrator of the program, has an important role to play given its focus on efficiently serving applicants while verifying compliance with program rules. In keeping with the recommendations of many commenters, we encourage USAC to work with existing entities at the state and municipal level to develop best practices and supporting technical information, and to consider developing its own in-house advisors to provide this support. We direct USAC to work with OMD and the Bureau to set the financial and operational parameters for providing such assistance and to provide guidance to applicants on the role and responsibilities of USAC when offering such assistance. As part of that oversight, we also direct the Bureau, working with OMD and USAC, to develop reference prices or other guidelines for E-rate supported purchases that could provide guidance both to applicants about prices that are likely to be considered cost-effective and to USAC in prioritizing applications for additional scrutiny for cost-effectiveness.

122. Data tracking and analysis. As part of its performance management system, USAC should review its data tracking and reporting capabilities to confirm that it tracks and reports the data necessary to measure progress toward E-rate program goals. We direct USAC, working with OMD and the Bureau, to create a comprehensive and efficient data reporting structure, to develop IT tools that facilitate analysis of all program data, and to increase public availability of such data to increase transparency and enable beneficiaries and other stakeholders both to assess progress by schools and libraries in obtaining access to high-speed broadband connectivity and to obtain detailed information from which to determine the cost effectiveness of spending for E-rate products and services by beneficiaries.

123. Increased program efficiencies. USAC also should review its pre- and post-commitment procedures and identify additional opportunities for data analysis, improved compliance oversight, and realization of increased efficiency and streamlining of processes for the review of applications and the

commitment and disbursement of funds. This review should encompass both USAC's direct staff as well as contract services such as those used in application in-take and processing. We direct USAC to work with Commission staff to identify areas in which a more common-sense and flexible administrative approach would best advance program goals while still remaining consistent with program rules set by the Commission.

124. Financial management. Finally, it is crucial that USAC include financial management as a component of its performance management system. The Commission has directed USAC to prepare financial statements for the USF, including the E-rate program, consistent with generally accepted accounting principles for federal agencies (Federal GAAP) and to keep the USF in accordance with the United States Standard General Ledger (USSGL). Working with OMD and other Commission staff, USAC should review and update its processes for evaluating and recommending the amounts that should be reserved to fund pending appeals, pending applications, and undisbursed funding commitments. We note that, for those appeals that may require additional commitments and disbursements in the unlikely event that the amounts held in reserve are not sufficient, the Commission has authorized USAC to use funds budgeted for subsequent funding years to fund discounts for successful appeals from prior funding years. For the pending applications and undisbursed funding commitments, we similarly authorize USAC to use funds budgeted for subsequent funding years to fund discounts for those applications and undisbursed funding commitments from prior funding years, in the unlikely event the amounts held in reserve are not sufficient.

**B. Expanding Commission Oversight of USAC's Administrative Performance**

125. We also delegate authority to the Bureau and OMD to ensure that beginning in funding year 2015 USAC conducts an annual performance review of progress against program goals and creates a forward-looking strategic plan for how USAC will expand and sustain performance improvements. The Bureau and OMD should work together to assist USAC in developing the measures that should be included in USAC's annual performance review. USAC must report at a minimum on the following components of the program's administration: pending applications; pending invoices, with specific



information about those that were delayed or rejected; USAC's strategy to reduce any backlog of applications, invoices or other necessary USAC approvals for applicant and service provider changes to requested funding; and an annual analysis of the program integrity assurance (PIA) program and invoicing procedures to determine if they are properly designed and calibrated to efficiently process applications and invoices while protecting against waste, fraud and abuse in the program.

126. Additionally, in the E-rate Modernization Order, we directed USAC to collect additional connectivity data from applicants, noting that this collection will provide useful and useable information to USAC and to the Commission about what is working and what needs to be improved. USAC should work with Commission staff to analyze and report the results of this data collection in this performance analysis.

## **V. FILING DEADLINES FOR APPEALS**

127. In the E-rate Modernization Order, we revised § 54.719 of our rules to require parties aggrieved by an action taken by a division of USAC, including the Schools and Libraries Division, to first seek review of that decision by USAC before filing an appeal with the Commission. We also explained that because USAC cannot waive our rules, parties seeking a waiver of our rules must seek relief directly from the Commission or the Bureau. We now clarify that affected parties have 60 days from the issuance of the decision to file an appeal, either with USAC in the case of requests for review, or the Commission or Bureau in the case of requests for waiver. Additionally, parties that file a request for review with USAC and receive an adverse outcome have 60 days from the issuance of that decision to file a request for review with the Commission.

## **VI. ORDER ON RECONSIDERATION**

### **A. Introduction**

128. In this section, we address various petitions for reconsideration of the E-rate Modernization Order and provide clarification on several issues raised by the Verizon Petition. Our rules allow any interested party to file a petition for reconsideration, and provide that a petition for

reconsideration which relies on facts or arguments not previously presented to the Commission shall be granted only where the facts or arguments relate to new events or changed circumstances, were unknown and not readily ascertainable by petitioners, or the Commission determines that the public interest requires them to be reconsidered.

129. Having considered the petitions for reconsideration, and all oppositions and replies filed in response to those petitions, we:

- grant in part the petitions for reconsideration filed by SECA, the Utah Education Network, NTCA/Utah Rural Telecom Association, and the West Virginia Department of Education (WVDE) seeking reconsideration of the areas that we have designated as urban for purposes of the E-rate program;
- deny USTelecom's request that we reconsider our decision to change the E-rate program's document retention period from five years to 10 years;
- deny requests by SECA, Verizon, and WVDE that we phase out E-rate support for components of telephone service and voicemail on the same schedule as voice service, and Verizon's request that we reconsider our decision to eliminate funding for e-mail offered as part of an Internet access service;
- deny requests by Verizon, SECA, and WVDE that we direct USAC to make category two funding commitments that cover multiple-years;
- clarify our cost-effectiveness test for data plans and air cards for mobile devices and our cost allocation rules for circuits that carry both voice and data traffic as requested by Verizon; and
- clarify for Verizon the E-rate Modernization Order's category two funding availability and policy on applicant prioritization. We also clarify for Verizon that the \$150 budget over five years applies to both managed and non-managed Wi-Fi.

## **B. Urban and Rural Designations**

130. On reconsideration, we modify § 54.505(b)(3) of our rules so that starting in funding year 2015 an individual school or library will be designated as “urban” if located in an “Urbanized Area” or an “Urban Cluster” with a population equal to or greater than 25,000, as determined by the most recent rural-urban classification by the U.S. Census Bureau (Census Bureau). Any individual school or library not designated as “urban” will be designated as “rural.” We make this change to our rules on reconsideration because petitioners have convincingly demonstrated that numerous schools and libraries located in small towns and remote areas where it is more expensive to receive E-rate funded services would be classified as urban and ineligible for additional E-rate support provided to rural applicants under the urban designation we adopted in the E-rate Modernization Order. In making this change on reconsideration, we grant in part the petitions for reconsideration filed by SECA, NTCA/Utah Rural Telecom Association, WVDE, and the Utah Education Network. While we change how individual sites are classified as urban or rural, we retain the current rule that any school district or library system must have a majority of schools or libraries in a rural area that meets our new urban/rural definition to qualify for the additional rural discount.

131. In the E-rate Modernization Order, we made two changes to the way applicants determine whether they are eligible for the rural discount. We first adopted the Census Bureau definition of rural and urban which classifies only communities with fewer than 2,500 people as rural. Under the Census Bureau definition, the term “urban” includes “urbanized areas,” which are defined as the densely settled core of census tracts or blocks with at least 50,000 people, and “urban clusters,” with 2,500 to 50,000 people, along with adjacent territories containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. “Rural” encompasses all population, housing, and territory not included within an urban area. We found that the adoption of the Census Bureau definitions of urban and rural was simpler for applicants than other alternatives and the data more current than the previous outdated definition. Also in the E-rate Modernization Order, we changed the criteria a school district or library system must use to determine

whether it qualifies as rural for the E-rate program, concluding that school districts and library systems would only be eligible for the rural discount if more than 50 percent of individual schools or libraries within that district or system are classified as rural.

132. As petitioners have explained, the population cutoff of 50,000 people combined with the requirement that a majority of all schools or libraries that are part of a school district or library system be classified as rural in order to qualify the school district or library system for the additional rural discount rate leaves a substantial number of school districts and library systems with schools or libraries in sparsely populated areas ineligible for the additional rural funding. For example, petitioners point out that as a result of the definition adopted in the E-rate Modernization Order:

- Schools in St. Mary's, West Virginia, a community with 1,860 people that is 20 miles from the nearest urbanized area, are part of the Pleasants County School District that, under the new rural definition, would be reclassified as urban.
- School districts in Iowa would be newly designated as urban, including the Bellevue Community School District, with an enrollment of only 700 students and located in Bellevue, a town of 2,543 people.
- Some of the most remote areas of the country situated in Alaska, including the communities of Barrow, Bethel, Ketchikan, Kotzebue, Nome and Sitka, have school districts that would be reclassified as urban.

133. Three of the four petitions for reconsideration on this issue initially requested that the definition of rural include all schools and libraries in "urban clusters." However, those petitioners modified their requests and joined with the fourth petitioner, the Utah Education Network, and a constituency of organizations representing schools, libraries, E-rate coordinators, rural telecommunications carriers, and other E-rate stakeholders, to recommend that the Commission consider a population threshold of 25,000 or greater as urban, and all other areas as rural for purposes of the E-rate program. No parties in the record have opposed this recommendation.

134. We agree with petitioners and other stakeholders that this new definition of rural is appropriate for ensuring support is targeted to areas where E-rate supported services are more costly. Other federal programs have used a similar population cutoff to designate whether an area is rural or urban. For example, the Commission adopted 25,000 as the population threshold when it revised its rural area definition for the rural health care universal service support mechanism (Rural Health Care Program) in 2004, essentially including as rural all census tracts that do not contain any population concentrations greater than 25,000. In adopting the Rural Health Care Program’s rural definition, the Commission noted that “[w]hile choosing the threshold is not an exact science, we believe urban areas above this size possess a critical mass of population and facilities.” In looking to other agencies, the U.S. Department of Education’s National Center for Education Statistics (NCES) classifies “small towns” as any incorporated or Census-defined place with fewer than 25,000 people. Some other federal programs have established even broader definitions of rural than the one we adopt today. For example, the 2014 Farm Bill included a provision related to the U.S. Department of Agriculture Rural Housing Program that increased the minimum rural population threshold for that program from 25,000 to 35,000.

135. Modifying our definition to treat areas with populations of less than 25,000 as rural achieves the policy objectives established in the E-rate Modernization Order by creating a rural definition based on regularly adjusted U.S. Census data while remaining simple and easy to administer. The Census Bureau already provides a spreadsheet of all urbanized areas and urban clusters with the populations of the towns and cities listed. To further eliminate any confusion regarding implementation of this new definition, the Commission will direct USAC to identify the areas that are rural for the purposes of the E-rate program and post a tool on its website as soon as it is practically possible. Going forward, we direct USAC to update the tool as necessary to reflect the most recent decennial census data and nationwide population estimates and update its system within 90 days of any change. However, we once again remind applicants that they have an obligation to ensure that they are seeking the correct discount rate.

136. In taking this action, we find that any additional burden on the Fund is justified by the overwhelming evidence in the record demonstrating that the rural definition adopted in the E-rate

Modernization Order excluded many applicants located in areas that are more expensive to serve because of their remote geography. Further, we believe that this change, by ensuring that many more schools and libraries have the benefit of additional funding to compensate for their rural geography, fully satisfies section 254(h)(1)(B) of the Act, which requires that the E-rate discount must be an amount that is “appropriate and necessary to ensure affordable access to and use of such services.”

137. Finally, we take this opportunity to eliminate an obsolete reference to the definition of what constitutes a rural area for the purposes of the E-rate program in § 54.5 of our rules. The E-rate definitions are properly found at 54.505(b) of our rules. However, the “Terms and definitions” section, found in § 54.5 of our rules, also defines “rural area” for the E-rate program. While we could also amend the definition in 54.5 of our rules and make it parallel to the definition in § 54.505(b), we think that the better course is to have the definition only in that section of our rules that is E-rate specific. We therefore amend § 54.5 to eliminate the reference to the E-rate definition of rural.

### **C. Document Retention Period**

138. We deny the USTelecom Petition seeking reconsideration of our extension of the E-rate document retention period from five to 10 years. The arguments offered by USTelecom were either sufficiently considered in this proceeding or do not raise new issues sufficient to warrant reconsideration. In the E-rate Modernization Order we concluded that the current five-year document retention requirement is not adequate for purposes of litigation under the False Claims Act (FCA). We also explained that a 10-year retention period will benefit program integrity and that electronic storage capabilities will minimize the administrative burden and cost for applicants and vendors. This decision is consistent with our adoption of 10-year document retention requirements for other universal service programs in the USF/ICC Transformation Order and the Lifeline Reform Order, 77 FR 25609, May 1, 2012.

139. In its petition, USTelecom argues that document retention requirements are not necessary for compliance with the FCA and that existing case law “provides no basis for the Commission to claim a need for extended document retention periods in order to comply with the FCA.” We find it unnecessary

to reach these arguments because our decision to adopt a 10-year document retention period is justified on several other independent grounds unrelated to the FCA. These non-FCA grounds are sufficient in and of themselves to justify a 10-year document retention period. In particular, we continue to find that:

- Even outside the FCA context, a longer document retention period will help the Commission guard against waste, fraud, and abuse in the universal service program by ensuring that evidence will be preserved.
- Congress has imposed no statutory barrier to recovery beyond five years. Indeed, the Debt Collection Improvement Act (DCIA), 31 USC 3701 et seq., generally directs agencies to “try to collect a claim of the [U.S.] Government for money or property arising out of the activities of, or referred to, the agency.”

140. Other rationales (also unrelated to the FCA) reinforce our belief that a 10-year document retention period will help ensure the integrity of the E-rate program and will assist Commission investigations into waste, fraud, and abuse, which may extend beyond a five-year period. For instance, Government-wide regulations known as the Federal Claims Collection Standards require agencies to “aggressively collect all debts.” Extending the retention period to ten years will assist the agency in carrying out this objective. Because the new document retention period is amply supported by these reasons, we need not reach USTelecom’s arguments regarding the FCA.

141. We also reject USTelecom’s remaining arguments regarding the new retention period. For instance, the fact that some other federal programs may have shorter retention periods does not require a contrary outcome, particularly since, as noted above, a 10-year document retention rule aligns the E-rate program with the document retention requirements of other universal service programs. Also unavailing is USTelecom’s argument that a 10-year document retention requirement is unnecessary, will impose significant costs on applicants and vendors, and is not supported by the record. We previously considered and rejected these arguments in this proceeding. US Telecom cites several commenters opposed to a longer document retention period. However, those commenters either failed to provide any

substantive support for their opposition to a 10-year requirement or offered general arguments about school staff turnover or shorter state and federal retention requirements without providing persuasive support as to why a 10-year requirement for the E-rate program would be overly burdensome. In the E-rate Modernization Order, we acknowledged stakeholder concerns about the potential costs and administrative burden of a 10-year retention requirement, but concluded that those costs and burdens can be mitigated with electronic storage capabilities and concluded that any such costs would be outweighed by the benefits to the integrity of the program. We reaffirm that conclusion here.

**D. Telephone Service Components, Voicemail, and E-mail**

142. We deny those portions of the Verizon and WVDE petitions requesting us to (i) reconsider our treatment of telephone service components, including directory assistance charges, text messaging, custom calling services, direct inward dialing (DID), 900/976 call blocking, and inside wire maintenance, as part of voice services; and (ii) phase out support for those services on the same five-year schedule as voice services rather than eliminating support beginning in funding year 2015. We therefore also deny SECA's request that we remove DID numbers from the list of eliminated telephone components and instead phase out support for DID numbers on the same schedule as voice services. We also deny Verizon's requests that voicemail be phased out on the same schedule as voice service and that the E-rate program support e-mail offered as part of an Internet access service.

143. In the E-rate Modernization Order we initiated a five-year phase down of E-rate support for voice services and eliminated support for other legacy and non-broadband services effective for funding year 2015. We explained that reductions in funding for voice services and eliminating funding for telephone components and non-broadband services was necessary in order to focus E-rate program spending on the high-speed broadband needed by schools to enable digital learning and by libraries to meet patrons' broadband needs.

144. Verizon and WVDE argue that cost allocating telephone service components and voicemail from a typical applicant phone bill will place a substantial burden on applicants, service providers, and USAC reviewers that is not justified by the corresponding savings to the E-rate program.



SECA argues that DID numbers, unlike the other telephone service components no longer eligible for E-rate support, are an essential feature of voice service and should therefore be placed on the same phase down schedule as voice services.

145. The arguments and facts presented in the Verizon, WVDE, and SECA petitions were previously considered in this rulemaking and do not merit reconsideration of our conclusions. In the E-rate Modernization NPRM, we indicated our intention to refocus E-rate funding on high-speed broadband services and, as part of that effort, proposed to eliminate E-rate support for telephone service components, voicemail, and e-mail. With respect to the components of telephone service, in the E-rate Modernization Order, we acknowledged that eliminating support for these services would require cost allocation but concluded that it would not be overly burdensome for applicants to seek funding for only the voice service component of their telephone service. We concluded that the benefits of streamlining voice service support by removing these services outweighed the additional burden on applicants of cost allocation for the next few funding years. We also noted that commenters that recommended a longer phase down period for voice services did not recommend a commensurate phase down for telephone service components or argue that those services required a phase down. Similarly, eliminating support for e-mail services will require cost allocation for e-mail offered as part of an Internet access service but we believe that the benefits of focusing funding on high-speed broadband justify the minimal cost allocation burden on applicants. Consistent with the third goal that we adopted in the E-rate Modernization Order, making E-rate processes fast, simple, and efficient, and in order to reduce the administrative burden on applicants, we expect that USAC will, working with the Bureau, establish guidelines for how applicants can proportion the cost of services on telephone bills in order to cost-allocate ineligible telephone service components and voicemail.

#### **E. Conditional or Multi-Year Commitments**

146. We deny the petitions filed by SECA, Verizon, and WVDE to the extent they request that the Commission reconsider the approach to category two funding adopted in the E-rate Modernization

Order. SECA, Verizon, and WVDE do not raise new facts or arguments that warrant Commission review of the E-rate program's prohibition on multi-year funding commitments.

147. In the E-rate Modernization Order, we created a mechanism for focusing funding on internal connections, including Wi-Fi, to allow schools and libraries to have affordable access to high-speed broadband connections needed for digital learning. To provide broader and more equitable support for category two services, the E-rate Modernization Order created five-year budgets for applicants that seek and receive category two funding in funding years 2015 and 2016. In the Second E-rate Modernization Order, we extend the five-year applicant budgets for category two services for three additional years. While we allow category two applicants to enter into multi-year agreements, we declined to make multi-year commitments available.

148. We deny the Verizon Petition with respect to its proposal to allow multi-year commitments for managed Wi-Fi services as a way to remove uncertainty about whether funding will be available in the later years of a five-year category two budget cycle. In the E-rate Modernization Order we considered and rejected arguments in favor of multi-year commitments in the E-rate program. As we explained in that order, obligating funds in advance of their availability would be detrimental to the administration of the program. We also explained that the multi-year application process we created in that order should allow applicants to achieve many of the efficiencies of a multi-year funding commitment. Furthermore, petitioners' concerns about the uncertainty of funding for category two services should be alleviated by the actions we have taken in the Second E-rate Modernization Order to raise the cap, and to extend the category two budget approach to cover five funding years. Therefore, we find it is in the best interest of the Fund to continue to have the Administrator obligate funds one funding year at a time.

149. We also deny SECA and WVDE's proposal that we provide conditional funding commitments to all valid applications for category two funding. Under this proposal, if funding is unavailable in the year in which it is sought, rather than being denied support, an applicant would receive a commitment of future support for those services. We find that this approach is not necessary because

uncertainty about funding for category two services should be alleviated by the actions we have taken to raise the annual E-rate cap and extend the category two budget framework for the next three years. Further, if there comes a time that we are unable to meet the demand for category two support, instead of providing predictability for applicants, SECA's and WVDE's proposals would lead to greater uncertainty, and administrative complexity because applicants would not know when they would receive reimbursement or how much reimbursement they would be entitled to receive. Under WVDE's proposal, applicants would use the discount rate in effect at the time the funds become available, meaning applicants would have to account for changes in student demographics and the urban/rural classification that affect the discount level. Thus, it would be very difficult for applicants to predict the level of expected reimbursement and could lead to budget shortfalls for applicants expecting a larger disbursement from the Fund.

#### **F. Clarifications**

150. Cost-Effectiveness for Wireless Data Plans and Air Cards. In response to Verizon's request for clarification, we offer additional guidance on the proper cost-effectiveness test for data plans and air cards for mobile devices. When purchasing any E-rate eligible service, applicants are required to carefully consider all bids and select the most cost-effective service offering, and must consider price to be the primary factor. In the E-rate Modernization Order, we took the opportunity to discuss the limited circumstances under which we would find data plans or air cards for mobile devices to be cost-effective. We explained that it is generally more cost-effective for schools and libraries to purchase a fixed broadband connection to the building and a WLAN capable of providing connectivity to multiple devices throughout the building. However, we recognized that there are circumstances, such as library bookmobiles or very small schools and libraries with high connectivity costs, where individual data plans or air cards for mobile devices may be the most cost-effective solution. We then provided an example of how applicants could demonstrate the cost-effectiveness of data plans or air cards for mobile devices through comparison of the costs for a WLAN deployment.

151. Verizon requests clarification that applicants should compare the cost of data plans or air cards for mobile devices to the cost of all components necessary to deliver connectivity to the end user device. Verizon also requests clarification as to whether applicants may take into account the potential limited availability of category two funding when evaluating the cost effectiveness of individual data plans and air cards for mobile devices.

152. We agree with the points raised by Verizon's first request and clarify that applicants that seek funding for data plans or air cards for mobile devices should compare the cost of all components necessary to deliver connectivity to the end user device, including the costs of Internet access and connectivity to the school or library, to the total cost of data plans or air cards when selecting the most cost-effective service option. Schools with existing fixed broadband connections should limit this comparison to the recurring cost of their current broadband connection plus the added cost of any upgrades to their broadband connections and any additional or updated internal connections needed to deploy a sufficiently robust WLAN with all capital investments amortized over their expected lifespan. We also caution applicants that seeking support for data plans or air cards for mobile devices for use in a school or library with an existing fixed broadband connection and WLAN implicates our prohibition on requests for duplicative services. In circumstances where an applicant successfully demonstrates that mobile data plans or air cards are the most cost-effective offering, such as a bookmobile or very small school or library facility, the impracticality or unusually high cost of purchasing a fixed broadband connection to the location should be a factor in the applicant's cost-effectiveness analysis.

153. We also clarify that an applicant may not consider whether it is likely to receive category two E-rate support when analyzing the cost-effectiveness of data plans or air cards for mobile devices. While our rules allow applicants to consider relevant factors other than cost as part of the cost-effectiveness determination, price must be the primary factor in an applicant's cost-effectiveness determination regardless of whether the applicant anticipates receiving category two E-rate support. Indeed our rules require that entities use the actual, i.e. pre-discount, cost of the service offered as a baseline for comparison, not the cost after the E-rate discount is applied.

154. Circuit Capacity Dedicated to Voice Services. Verizon also requests that we clarify how the reduced discount rates for voice services apply to costs incurred for circuit capacity dedicated to providing voice services. We clarify that applicants must cost allocate charges attributable to voice services from the cost of all circuits used for dedicated voice and data services and that those voice service charges will be subject to the five-year voice service phase down. In the E-rate Modernization Order, we specified that the five-year phase down of support for voice services will apply to all applicants and all costs incurred for the provision of telephone services and circuit capacity dedicated to providing voice services. Verizon seeks general clarification of the term “circuit capacity dedicated to providing voice services.” Verizon also requests specific clarification of the proper cost allocation method for voice services on three types of circuits: 1) a circuit leased for a district-operated private voice network, 2) a leased WAN circuit that carries both voice and broadband traffic, and 3) a circuit that carries both voice and broadband services. As discussed below, Commission rules require applicants to cost allocate charges attributable to voice services from the circuit cost in all circumstances described by Verizon.

155. Under the Commission’s rules, if a product or service contains both eligible and ineligible components, costs should be allocated to the extent that a clear delineation can be made between the eligible and ineligible components. The clear delineation must have a tangible basis and the price for the eligible portion must be the most cost-effective means of receiving the eligible service. We understand that application of our cost allocation rules to circuits used for both voice and data services may require some additional effort from applicants and service providers; however, the requirement does not impose a substantial burden and provides an important benefit to the program.

156. We provide the following clarifications regarding application of our cost allocation rules to circuits carrying both voice and data services.

- For a bundled voice and data service provided over a single circuit, (e.g., a cable voice/data bundle) the voice service portion must be cost allocated and subject to the voice services phase down. As with telephone service components, one proper method for cost allocating

the voice service portion of a bundled voice/data circuit may be for the applicant to seek an appropriate cost allocation from its service provider.

- For circuits dedicated solely to voice service, including PRIs, SIP trunks, and VoIP provider circuits, the full cost of the dedicated circuit is subject to the voice services phase down. Verizon's description of a circuit leased for a district-operated private voice network would be considered a circuit dedicated to voice service.
- For services that dedicate a portion of a data circuit to voice service, (e.g., voice channels on a T-1 circuit or dedicated bandwidth for VoIP traffic using a virtual local area network) the cost of the dedicated portion of the circuit must be cost allocated and subject to the voice services phase down.
- For voice applications that run over a data circuit but do not require any dedicated circuit capacity, the applicant is not required to cost allocate any portion of the data circuit cost for voice services.

157. Funding for Budgets. Verizon asks the Commission to clarify that it expects full funding to be available up to the budgeted amount in each of the five years of an applicant's category two budget and that priority be given in later years of a budget cycle to applicants that receive category two support in the first funding years 2015 and 2016. Based on historic demand and the changes we made to the E-rate program in both E-rate Modernization Orders, we expect funding will be sufficient to meet demand but we cannot guarantee that category two funding will be available to any particular applicant in any particular year.

## **VII. DELEGATION TO REVISE RULES**

158. Given the complexities associated with modernizing the E-rate program, modifying our rules, and the other programmatic changes we adopt in this Report and Order, we delegate authority to the Bureau to make any further rule revisions as necessary to ensure the changes to the program adopted in this Report and Order are reflected in our rules. This includes correcting any conflicts between new

and/or revised rules and existing rules as well as addressing any omissions or oversights. If any such rule changes are warranted the Bureau shall be responsible for such change. We note that any entity that disagrees with a rule change made on delegated authority will have the opportunity to file an Application for Review by the full Commission. We expect the Bureau and USAC to monitor the program for waste, fraud and abuse and we delegate authority to the Bureau and OMD to specify additional administrative requirements in connection with the program changes we adopt today and authority to provide guidance to USAC in its implementation of these changes. The purpose of this delegation is to protect against potential waste, fraud, and abuse in the E-rate program.

## **VIII. PROCEDURAL MATTERS**

### **A. Final Regulatory Flexibility Analysis**

159. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Federal Communications Commission (Commission) included Initial Regulatory Flexibility Analyses (IRFAs) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the E-rate Modernization NPRM and E-rate Modernization FNPRM in WC Docket No. 13-184. The Commission sought written public comment on the proposals in the E-rate Modernization NPRM and E-rate Modernization FNPRM, including comment on the IRFAs. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

### **B. Need for, and Objectives of, the Proposed Rule**

160. The Commission is required by section 254 of the Communications Act of 1934, as amended, to promulgate rules to implement the universal service provisions of section 254. On May 8, 1997, the Commission adopted rules to reform its system of universal service support mechanisms so that universal service is preserved and advanced as markets move toward competition. Specifically, under the schools and libraries universal service support mechanism, also known as the E-rate program, eligible schools, libraries, and consortia that include eligible schools and libraries may receive discounts for eligible telecommunications services, Internet access, and internal connections.

161. In July 2013, the Commission issued a Notice of Proposed Rulemaking seeking public comment on proposals to update the E-rate program to focus on 21<sup>st</sup> Century broadband needs of schools and libraries. Later, in February 2014, the Wireline Competition Bureau (Bureau) issued a Public Notice seeking focused comment on issues raised in the E-rate Modernization NPRM. Then, in July 2014, we adopted a number of proposals in the E-rate Modernization NPRM and issued a Further Notice of Proposed Rulemaking seeking public comment on additional proposals to update the E-rate program. In this Report and Order, we adopt a number of the proposals put forward in the E-rate Modernization NPRM and E-rate Modernization FNPRM.

162. This Report and Order continues the Commission's efforts to promote broadband access for schools and libraries and support the goals that we adopted in the E-rate Modernization Order. In it, we lower the barrier to obtaining high-speed connections and increase the E-rate funding cap to meet the needs of the program. To lower barriers to obtaining high-speed connections, we (1) provide greater flexibility for applicants with respect to payment options for large non-recurring capital costs for high-speed broadband; (2) equalize the treatment of lit and dark fiber to offer applicants an additional cost-effective option for deploying high-speed broadband; (3) allow self-construction of high-speed broadband facilities by schools and libraries when self-construction is the most cost-effective option; (4) provide up to an additional 10 percent in category one funding to match state funding for special construction charges for last-mile facilities to support high-speed broadband; and (5) obligating recipients of high-cost Universal Service Fund support to offer high-speed broadband to schools and libraries located in the geographic area where the carrier receives high-cost support at rates reasonably comparable to similar services in urban areas. To meet the needs of the program, we raise the E-rate funding cap to \$3.9 billion.

### **C. Summary of Significant Issues Raised by Public Comments to the IRFA**

163. No comments specifically addressed the IRFA.



**D. Description and Estimate of the Number of Small Entities to Which the Proposed Rules May Apply**

164. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A small business concern is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA). Nationwide, there are a total of approximately 28.2 million small businesses, according to the SBA. A “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”

165. Nationwide, as of 2002, there were approximately 1.6 million small organizations. The term “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.” Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States. We estimate that, of this total, 84,377 entities were “small governmental jurisdictions.” Thus, we estimate that most governmental jurisdictions are small.

166. Small entities potentially affected by the proposals herein include eligible schools and libraries and the eligible service providers offering them discounted services.

167. Schools and Libraries. As noted, “small entity” includes non-profit and small government entities. Under the schools and libraries universal service support mechanism, which provides support for elementary and secondary schools and libraries, an elementary school is generally “a non-profit institutional day or residential school that provides elementary education, as determined under state law.” A secondary school is generally defined as “a non-profit institutional day or residential school that provides secondary education, as determined under state law,” and not offering education beyond

grade 12. For-profit schools and libraries, and schools and libraries with endowments in excess of \$50,000,000, are not eligible to receive discounts under the program, nor are libraries whose budgets are not completely separate from any schools. Certain other statutory definitions apply as well. The SBA has defined elementary and secondary schools and libraries having \$6 million or less in annual receipts as small entities. In funding year 2007, approximately 105,500 schools and 10,950 libraries received funding under the schools and libraries universal service mechanism. Although we are unable to estimate with precision the number of these entities that would qualify as small entities under SBA's size standard, we estimate that fewer than 105,500 schools and 10,950 libraries might be affected annually by our action, under current operation of the program.

168. Telecommunications Service Providers. First, neither the Commission nor the SBA has developed a size standard for small incumbent local exchange services. The closest size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees. According to Commission data, 1,307 incumbent carriers reported that they were engaged in the provision of local exchange services. Of these 1,307 carriers, an estimated 1,006 have 1,500 or fewer employees and 301 have more than 1,500 employees. Thus, under this category and associated small business size standard, we estimate that the majority of entities are small. We have included small incumbent local exchange carriers in this RFA analysis. A "small business" under the RFA is one that, inter alia, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and "is not dominant in its field of operation." The SBA's Office of Advocacy contends that, for RFA purposes, small incumbent local exchange carriers are not dominant in their field of operation because any such dominance is not "national" in scope. We have therefore included small incumbent carriers in this RFA analysis, although we emphasize that this RFA action has no effect on the Commission's analyses and determinations in other, non-RFA contexts.

169. Second, neither the Commission nor the SBA has developed a definition of small entities specifically applicable to providers of interexchange services (IXCs). The closest applicable definition

under the SBA rules is for wired telecommunications carriers. This provides that a wired telecommunications carrier is a small entity if it employs no more than 1,500 employees. According to the Commission's 2010 Trends Report, 359 companies reported that they were engaged in the provision of interexchange services. Of these 300 IXC's, an estimated 317 have 1,500 or fewer employees and 42 have more than 1,500 employees. Consequently, the Commission estimates that most providers of interexchange services are small businesses.

170. Third, neither the Commission nor the SBA has developed a definition of small entities specifically applicable to competitive access services providers (CAPs). The closest applicable definition under the SBA rules is for wired telecommunications carriers. This provides that a wired telecommunications carrier is a small entity if it employs no more than 1,500 employees. According to the 2010 Trends Report, 1,442 CAPs and competitive local exchange carriers (competitive LECs) reported that they were engaged in the provision of competitive local exchange services. Of these 1,442 CAPs and competitive LECs, an estimated 1,256 have 1,500 or fewer employees and 186 have more than 1,500 employees. Consequently, the Commission estimates that most providers of competitive exchange services are small businesses.

171. Wireless Telecommunications Carriers (except Satellite). Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category. Prior to that time, such firms were within the now-superseded categories of "Paging" and "Cellular and Other Wireless Telecommunications." Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data. For the category of Paging, data for 2002 show that there were 807 firms that operated for the entire year. Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more. For the category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year. Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.

Thus, we estimate that the majority of wireless firms are small.

172. Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. As noted, the SBA has developed a small business size standard for Wireless Telecommunications Carriers (except Satellite). Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees. According to the 2010 Trends Report, 413 carriers reported that they were engaged in wireless telephony. Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees. We have estimated that 261 of these are small under the SBA small business size standard.

173. Common Carrier Paging. As noted, since 2007 the Census Bureau has placed paging providers within the broad economic census category of Wireless Telecommunications Carriers (except Satellite). Prior to that time, such firms were within the now-superseded category of “Paging.” Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior category and associated data. The data for 2002 show that there were 807 firms that operated for the entire year. Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more. Thus, we estimate that the majority of paging firms are small.

174. In addition, in the Paging Second Report and Order, 64 FR 33762, June 24, 1999, the Commission adopted a size standard for “small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A small business is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. The SBA has approved this definition. An initial auction of Metropolitan Economic Area (“MEA”) licenses was conducted in the year 2000. Of the 2,499 licenses auctioned, 985 were sold. Fifty-seven companies claiming small business status won 440 licenses. A subsequent auction of MEA and Economic Area (“EA”) licenses was held in the year 2001. Of the 15,514 licenses auctioned, 5,323 were sold. One hundred thirty-two companies claiming small business

status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs, was held in 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses.

175. Currently, there are approximately 74,000 Common Carrier Paging licenses. According to the most recent Trends in Telephone Service, 291 carriers reported that they were engaged in the provision of “paging and messaging” services. Of these, an estimated 289 have 1,500 or fewer employees and two have more than 1,500 employees. We estimate that the majority of common carrier paging providers would qualify as small entities under the SBA definition.

176. Internet Service Providers. The 2007 Economic Census places these firms, whose services might include voice over Internet protocol (VoIP), in either of two categories, depending on whether the service is provided over the provider’s own telecommunications facilities (e.g., cable and DSL ISPs), or over client-supplied telecommunications connections (e.g., dial-up ISPs). The former are within the category of Wired Telecommunications Carriers, which has an SBA small business size standard of 1,500 or fewer employees. The latter are within the category of All Other Telecommunications, which has a size standard of annual receipts of \$25 million or less. The most current Census Bureau data for all such firms, however, are the 2002 data for the previous census category called Internet Service Providers. That category had a small business size standard of \$21 million or less in annual receipts, which was revised in late 2005 to \$23 million. The 2002 data show that there were 2,529 such firms that operated for the entire year. Of those, 2,437 firms had annual receipts of under \$10 million, and an additional 47 firms had receipts of between \$10 million and \$24,999,999. Consequently, we estimate that the majority of ISP firms are small entities.

177. Vendors of Internal Connections: Telephone Apparatus Manufacturing. The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be standalone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones,

telephone answering machines, LAN modems, multi-user modems, and other data communications equipment, such as bridges, routers, and gateways.” The SBA has developed a small business size standard for Telephone Apparatus Manufacturing, which is: all such firms having 1,000 or fewer employees. According to Census Bureau data for 2002, there were a total of 518 establishments in this category that operated for the entire year. Of this total, 511 had employment of under 1,000, and an additional seven had employment of 1,000 to 2,499. Thus, under this size standard, the majority of firms can be considered small.

178. Vendors of Internal Connections: Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.” The SBA has developed a small business size standard for firms in this category, which is: all such firms having 750 or fewer employees. According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year. Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999. Thus, under this size standard, the majority of firms can be considered small.

179. Vendors of Internal Connections: Other Communications Equipment Manufacturing. The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).” The SBA has developed a small business size standard for Other Communications Equipment Manufacturing, which is having 750 or fewer employees. According to Census Bureau data for 2002, there were a total of 503 establishments in this category that operated for the entire year. Of this total, 493 had employment of under 500, and an additional 7 had employment of 500 to 999. Thus, under this size standard, the majority of firms can be

considered small.

**E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

180. Some of our rule changes will result in additional recordkeeping requirements for small entities. For all of those rule changes, we have determined that the benefit the rule change will bring for the program outweighs the burden of the increased recordkeeping requirement.

**1. Increase in Projected Reporting, Recordkeeping and Other Compliance Requirements**

181. Compliance burdens. All of the rules we implement impose some burden on small entities by requiring them to become familiar with the new rule to comply with it. For many new rules, the burden of becoming familiar with the new rule in order to comply with it is the only burden the rule imposes.

182. Extending pre-discount budgets for category two services for three additional years. This rule change will increase recordkeeping burdens by requiring applicants to calculate their budgets and keep track of the amount that they have spent in a five-year period. The benefit of making category two funding available to applicants outweighs this burden.

183. Permitting self-construction option. Our permitting applicants to receive E-rate funding for self-construction networks creates the minor additional burden of requiring applicants to seek bids for both self-construction and services-only. The cost savings applicants and the Fund will realize from this rule change justifies these burdens.

184. Additional discounts when states match funds for fiber construction. Providing additional discounts when states match funds for fiber construction will impose the additional minimal burden of requiring applicants to produce documentation verifying states' matched funds. The additional USF funding for fiber construction that this rule change makes available to applicants outweighs this burden.

185. High-cost providers. The requirement that recipients of high-cost support offer broadband service to eligible schools and libraries at rates reasonably comparable to rates charged in urban areas will increase recordkeeping burdens for some service providers and some E-rate applicants. Specifically, E-rate service providers who receive high-cost support will have the additional burden of bidding for, and possibly providing, services to schools and libraries in areas they receive high-cost support. Schools and libraries in those areas will have the additional burden of evaluating bids from these service providers.

## **2. Decrease in Projected Reporting, Recordkeeping and Other Compliance Requirements**

186. Suspending USAC's multi-year amortization policy for non-recurring construction costs. Our suspension of USAC's multi-year amortization policy for non-recurring construction costs will decrease recordkeeping requirements by eliminating the burdens associated with amortization for the duration of the suspension.

## **3. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

187. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”

188. This rulemaking could impose minimal additional burdens on small entities. We considered alternatives to the rulemaking changes that increase projected reporting, recordkeeping and other compliance requirements for small entities.



## **189. Report to Congress**

190. The Commission will send a copy of this Report and Order, including this FRFA, in a report to be sent to Congress pursuant to the SBREFA. In addition, the Commission will send a copy of the Report and Order, including the FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Report and Order and the FRFA (or summaries thereof) will also be published in the **Federal Register**.

## **F. Paperwork Reduction Act Analysis**

191. This Report and Order and Order on Reconsideration contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the revised information collection requirements contained in this proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, the Commission previously sought specific comment on how it might further reduce the information collection burden on small business concerns with fewer than 25 employees.

## **G. Congressional Review Act**

192. The Commission will include a copy of this Report and Order and Order on Reconsideration in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.

## **IX. ORDERING CLAUSES**

193. Accordingly, it is Ordered, that pursuant to the authority contained in sections 1 through 4, 201 through 205, 254, 303(r), 403, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. 151-154, 201-205, 254, 303(r), 403, and 405, and section 706 of the Telecommunications Act of 1996, 47 U.S.C. 1302, this Report and Order and Order on Reconsideration is Adopted effective **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**, except to the extent expressly addressed below.

194. It is further ordered, that pursuant to the authority contained in sections 1 through 4, 201 through 205, 254, 303(r), 403, and 405 of the Communications Act of 1934, as amended, 47 U.S.C. 151-154, 201-205, 254, 303(r), 403, and 405 and section 706 of the Telecommunications Act of 1996, 47 U.S.C. 1302, part 54 of the Commission's rules, 47 CFR part 54, is Amended as set forth below, and such rule amendments shall be effective **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**, except for amendments in §§ 54.313(e)(2) and (f)(1), 54.503(c)(1) and 54.504(a)(1)(iii), which are subject to the PRA and will become effective upon announcement in the Federal Register of OMB approval of the subject information collection requirements and of the effective date; and except for amendments in §§ 54.308(b), 54.309(b), 54.505(b)(3) and (b)(3)(i), and 54.507(a) and (c), which shall become effective on **July 1, 2015**; and amendments in § 54.518 and paragraphs (b), (c) and (f) of § 54.505, which shall become effective on **July 1, 2016**.

195. It is further ordered that, pursuant to the authority contained in section 405 of the Communications Act of 1934, as amended, 47 U.S.C. 405, and § 1.429 of the Commission's rules, 47 CFR 1.429, the Petition for Clarification and/or Reconsideration filed by NTCA-The Rural Broadband Association and the Utah Rural Telecom Association on September 18, 2014, is Granted in Part and Denied in Part to the extent described herein.

196. It is further ordered that, pursuant to the authority contained in section 405 of the Communications Act of 1934, as amended, 47 U.S.C. 405, and § 1.429 of the Commission's rules, 47 CFR 1.429, the Petition for Reconsideration or Clarification filed by the State E-rate Coordinators' Alliance on September 18, 2014, is Granted in Part and Denied in Part to the extent described herein.

197. It is further ordered that, pursuant to the authority contained in section 405 of the Communications Act of 1934, as amended, 47 U.S.C. 405, and § 1.429 of the Commission's rules, 47 CFR 1.429, the Petition for Reconsideration filed by the Utah Education Network on September 18, 2014, is Granted in Part and Denied in Part to the extent described herein.

198. It is further ordered that, pursuant to the authority contained in section 405 of the Communications Act of 1934, as amended, 47 U.S.C. 405, and § 1.429 of the Commission's rules, 47

CFR 1.429, the Petition for Reconsideration or Clarification filed by the West Virginia Department of Education on September 18, 2014, is Granted in Part and Denied in Part to the extent described herein.

199. It is further ordered that, pursuant to the authority contained in section 405 of the Communications Act of 1934, as amended, 47 U.S.C. 405, and § 1.429 of the Commission's rules, 47 CFR 1.429, the Petition for Reconsideration filed by the United States Telecom Association on September 18, 2014, is Denied.

200. It is further ordered that, pursuant to the authority contained in section 405 of the Communications Act of 1934, as amended, 47 U.S.C. 405, and § 1.429 of the Commission's rules, 47 CFR 1.429, the Petition for Reconsideration and/or Clarification filed by Verizon on September 18, 2014, is Granted in Part and Denied in Part to the extent described herein.

201. It is further ordered that the Commission shall send a copy of this Report and Order and Order on Reconsideration to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. 801(a)(1)(A).

202. It is further ordered that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, shall send a copy of the Report and Order, including the Final Regulatory Flexibility Analysis and Initial Regulatory Flexibility Act Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch,  
Secretary.

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 54 as follows:

## **PART 54 -- UNIVERSAL SERVICE**

1. The authority citation for part 54 continues to read as follows:

Authority: Sections 1, 4(i), 5, 201, 205, 214, 219, 220, 254, 303(r), and 403 of the Communications Act of 1934, as amended, and section 706 of the Telecommunications Act of 1996, as amended; 47 U.S.C. 151, 154(i), 155, 201, 205, 214, 219, 220, 254, 303(r), 403, and 1302 unless otherwise noted.

### **Subpart A---General Information**

#### **§ 54.5 [Amended].**

2. Section 54.5 is amended by removing the definition of “Rural area.”
3. Section 54.308 is amended by adding paragraph (b) to read as follows:

#### **§ 54.308 Broadband Public Interest Obligations for Recipients of High-Cost Support.**

\* \* \* \* \*

(b) Rate-of-return carrier recipients of high-cost support are required upon reasonable request to bid on category one telecommunications and Internet access services in response to a posted FCC Form 470 seeking broadband service that meets the connectivity targets for the schools and libraries universal service support program for eligible schools and libraries (as described in § 54.501) within that carrier’s service area. Such bids must be at rates reasonably comparable to rates charged to eligible schools and libraries in urban areas for comparable offerings.

4. Section 54.309 is amended by revising paragraph (b) to read as follows:

#### **§ 54.309 Connect America Fund Phase II Public Interest Obligations.**

\* \* \* \* \*

(b) Recipients of Connect America Phase II model-based support, recipients of Phase II Connect America support awarded through a competitive bidding process, and non-contiguous price cap carriers receiving

Phase II frozen support in lieu of model-based support are required to bid on category one telecommunications and Internet access services in response to a posted FCC Form 470 seeking broadband service that meets the connectivity targets for the schools and libraries universal service support program for eligible schools and libraries (as described in § 54.501) located within any area in a census block where the carrier is receiving Phase II model-based support. Such bids must be at rates reasonably comparable to rates charged to eligible schools and libraries in urban areas for comparable offerings.

5. Section 54.313 is amended by revising paragraphs (e)(2)(iii) and (iv), adding paragraph (e)(2)(v), revising paragraphs (f)(1)(i) and (ii), and revising paragraph (f)(1)(iii) to read as follows:

**§ 54.313 Annual reporting requirements for high-cost recipients.**

\* \* \* \* \*

(e) \* \* \*

(2) \* \* \*

(iii) A list of the geocoded locations to which the eligible telecommunications carrier newly deployed facilities capable of delivering broadband meeting the § 54.309 public interest obligations with Connect America support in the prior year. The final progress report filed on July 1, 2021 must include the total number and geocodes of all the supported locations that a price cap carrier has built out to with service meeting the § 54.309 public interest obligations;

(iv) The total amount of Phase II support, if any, the price cap carrier used for capital expenditures in the previous calendar year; and

(v) A certification that it bid on category one telecommunications and Internet access services in response to all FCC Form 470 postings seeking broadband service that meets the connectivity targets for the schools and libraries universal service support program for eligible schools and libraries (as described in § 54.501) located within any area in a census block where the carrier is

receiving Phase II model-based support, and that such bids were at rates reasonably comparable to rates charged to eligible schools and libraries in urban areas for comparable offerings.

\* \* \* \* \*

(f) \* \* \*

(1) \* \* \*

- (i) A letter certifying that it is taking reasonable steps to provide upon reasonable request broadband service at actual speeds of at least 4 Mbps downstream/1 Mbps upstream, with latency suitable for real-time applications, including Voice over Internet Protocol, and usage capacity that is reasonably comparable to comparable offerings in urban areas as determined in an annual survey, and that requests for such service are met within a reasonable amount of time;
- (ii) The number, names, and addresses of community anchor institutions to which the ETC newly began providing access to broadband service in the preceding calendar year; and
- (iii) For rate-of-return carrier recipients of high-cost support, a certification that it bid on category one telecommunications and Internet access services in response to all reasonable requests in posted FCC Form 470s seeking broadband service that meets the connectivity targets for the schools and libraries universal service support program for eligible schools and libraries (as described in § 54.501) within its service area, and that such bids were at rates reasonably comparable to rates charged to eligible schools and libraries in urban areas for comparable offerings.

#### **Subpart F---Universal Service Support for Schools and Libraries**

6. Section 54.502 is amended by revising paragraph (a) introductory text, paragraph (b) introductory text, paragraphs (b)(1) through (3), paragraph (b)(5), and paragraph (c) to read as follows:

##### **§ 54.502 Eligible Services.**

(a) Supported services. All supported services are listed in the Eligible Services List as updated annually

in accordance with paragraph (d) of this section. The services in this subpart will be supported in addition to all reasonable charges that are incurred by taking such services, such as state and federal taxes. Charges for termination liability, penalty surcharges, and other charges not included in the cost of taking such service shall not be covered by the universal service support mechanisms. The supported services fall within the following general categories:

\* \* \* \* \*

(b) Funding years 2015-2019. Libraries, schools, or school districts with schools that receive funding for category two services in any of the funding years between 2015 and 2019 shall be eligible for support for category two services pursuant to paragraphs (b)(1) through (6) of this section.

(1) Five-year budget. Each eligible school or library shall be eligible for a budgeted amount of support for category two services over a five-year funding cycle beginning the first funding year support is received. Excluding support for internal connections received prior to funding year 2015, each school or library shall be eligible for the total available budget less any support received for category two services in the prior funding years of that school's or library's five-year funding cycle. The budgeted amounts and the funding floor shall be adjusted for inflation annually in accordance with § 54.507(a)(2).

(2) School budget. Each eligible school shall be eligible for support for category two services up to a pre-discount price of \$150 per student over a five-year funding cycle. Applicants shall calculate the student count per school at the time the discount is calculated each funding year. New schools may estimate the number of students, but must repay any support provided in excess of the maximum budget based on student enrollment the following funding year.

(3) Library budget. Each eligible library located within the Institute of Museum and Library Services locale codes of "11 – City, Large," defined as a territory inside an urbanized area and inside a principal city with a population of 250,000 or more, "12 – City, Midsize," defined as a territory inside an urbanized area and inside a principal city with a population less than 250,000 and greater than or

equal to 100,000, or “21 – Suburb, Large,” defined as a territory outside a principal city and inside an urbanized area with population of 250,000 or more, shall be eligible for support for category two services, up to a pre-discount price of \$5.00 per square foot over a five-year funding cycle. All other eligible libraries shall be eligible for support for category two services, up to a pre-discount price of \$2.30 per square foot over a five-year funding cycle. Applicants shall provide the total area for all floors, in square feet, of each library outlet separately, including all areas enclosed by the outer walls of the library outlet and occupied by the library, including those areas off-limits to the public.

\* \* \* \* \*

(5) Requests. Applicants shall request support for category two services for each school or library based on the number of students per school building or square footage per library building. Category two funding for a school or library may not be used for another school or library. If an applicant requests less than the maximum budgeted category two support available for a school or library, the applicant may request the remaining balance in a school’s or library’s category two budget in subsequent funding years of the five-year funding cycle. The costs for category two services shared by multiple eligible entities shall be divided reasonably between each of the entities for which support is sought in that funding year.

\* \* \* \* \*

(c) Funding year 2020 and beyond. Absent further action from the Commission, each eligible library or school in a school district that either did not receive funding for category two services in funding years 2015 through 2019 or has completed its five-year funding cycle, shall be eligible for support for category two services, except basic maintenance services, no more than twice every five funding years. For the purpose of determining eligibility, the five-year period begins in any funding year in which the school or library receives discounted category two services other than basic maintenance services. If a school or library receives category two services other than basic maintenance services that are shared with other schools or libraries (for example, as part of a consortium), the shared services will be attributed to the school or library in determining whether it is eligible for support. Support is not available for category



two services provided to or within non-instructional school buildings or separate library administrative buildings unless those category two services are essential for the effective transport of information to or within one or more instructional buildings of a school or non-administrative library buildings, or the Commission has found that the use of those services meets the definition of educational purpose, as defined in §54.500.

\* \* \* \* \*

7. Section 54.503 is amended by revising paragraph (c)(1) to read as follows:

**§ 54.503 Competitive bidding requirements.**

\* \* \* \* \*

(c) Posting of FCC Form 470. (1) An eligible school, library, or consortium that includes an eligible school or library seeking bids for eligible services under this subpart shall submit a completed FCC Form 470 to the Administrator to initiate the competitive bidding process. The FCC Form 470 and any request for proposal cited in the FCC Form 470 shall include, at a minimum, the following information:

- (i) A list of specified services for which the school, library, or consortium requests bids;
- (ii) Sufficient information to enable bidders to reasonably determine the needs of the applicant;
- (iii) To the extent an applicant seeks the following services or arrangements, an indication of the applicant's intent to seek:
  - (A) Construction of network facilities that the applicant will own;
  - (B) A dark-fiber lease, indefeasible right of use, or other dark-fiber service agreement or the modulating electronics necessary to light dark fiber; or
  - (C) A multi-year installment payment agreement with the service provider for the non-discounted share of special construction costs;
- (iv) To the extent an applicant seeks construction of a network that the applicant will own, the applicant must also solicit bids for both the services provided over third-party networks and

construction of applicant-owned network facilities, in the same request for proposals;

(v) To the extent an applicant seeks bids for special construction associated with dark fiber or bids to lease and light dark fiber, the applicant must also solicit bids to provide the needed services over lit fiber; and

(vi) To the extent an applicant seeks bids for equipment and maintenance costs associated with lighting dark fiber, the applicant must include these elements in the same FCC Form 470 as the dark fiber.

\* \* \* \* \*

8. Section 54.504 is amended by revising paragraph (a)(1)(iii) to read as follows:

**§ 54.504 Requests for services.**

(a) \* \* \*

(1) \* \* \*

(iii) The entities listed on the FCC Form 471 application have secured access to all of the resources, including computers, training, software, maintenance, internal connections, and electrical connections, necessary to make effective use of the services purchased. The entities listed on the FCC Form 471 will pay the discounted charges for eligible services from funds to which access has been secured in the current funding year or, for entities that will make installment payments, they will ensure that they are able to make all required installment payments. The billed entity will pay the non-discount portion of the cost of the goods and services to the service provider(s).

\* \* \* \* \*

9. Section 54.505 is amended by revising paragraph (b) introductory text, paragraph (b)(3) introductory text, paragraph (b)(3)(i), and paragraphs (c) and (f) to read as follows:

**§ 54.505 Discounts.**

\* \* \* \* \*

(b) Discount percentages. Except as provided in paragraph (f), the discounts available to eligible schools and libraries shall range from 20 percent to 90 percent of the pre-discount price for all eligible services provided by eligible providers, as defined in this subpart. The discounts available to a particular school, library, or consortium of only such entities shall be determined by indicators of poverty and high cost.

\* \* \* \* \*

(3) The Administrator shall classify schools and libraries as “urban” or “rural” according to the following designations.

(i) The Administrator shall designate a school or library as “urban” if the school or library is located in an urbanized area or urban cluster area with a population equal to or greater than 25,000, as determined by the most recent rural-urban classification by the Bureau of the Census. The Administrator shall designate all other schools and libraries as “rural.”

\* \* \* \* \*

(c) Matrices. Except as provided in paragraphs (d) and (f) of this section, the Administrator shall use the following matrices to set discount rates to be applied to eligible category one and category two services purchased by eligible schools, school districts, libraries, or consortia based on the institution’s level of poverty and location in an “urban” or “rural” area.

	Category one schools and libraries discount matrix		Category two schools and libraries discount matrix	
	Discount level		Discount level	
% of students eligible for National School Lunch Program	Urban discount	Rural discount	Urban discount	Rural discount

< 1.....	20	25	20	25
1-19.....	40	50	40	50
20-34.....	50	60	50	60
35-49.....	60	70	60	70
50-74.....	80	80	80	80
75-100.....	90	90	85	85

\* \* \* \* \*

(f) Additional discounts for State matching funds for special construction. Federal universal service discounts shall be based on the price of a service prior to the application of any state-provided support for schools or libraries. When a governmental entity described below provides funding for special construction charges for networks that meet the long-term connectivity targets for the schools and libraries universal service support program, the Administrator shall match the governmental entity's contribution as provided for below:

(1) All E-rate applicants. When a State government provides funding for special construction charges for a broadband connection to a school or library the Administrator shall match the State's contribution on a one-dollar-to-one-dollar basis up to an additional 10 percent discount, provided however that the total support from federal universal service and the State may not exceed 100 percent.

(2) Tribal schools. When a State government, Tribal government, or federal agency provides funding for special construction charges for a broadband connection to a school operated by the Bureau of Indian Education or by a Tribal government, the Administrator shall match the governmental entity's contribution on a one-dollar-to-one-dollar basis up to an additional 10 percent discount, provided however that the total support from federal universal service and the governmental entity may not exceed 100 percent.

(3) Tribal libraries. When a State government, Tribal government, or federal agency provides funding for special construction charges for a broadband connection to a library operated by Tribal governments, the Administrator shall match the governmental entity's contribution on a one-dollar-to-one-dollar basis up to an additional 10 percent discount, provided however that the total support from federal universal service and the governmental entity may not exceed 100 percent.

10. Section 54.507 is amended by revising paragraphs (a) introductory text, (a)(1) and (3), (c), and (d) to read as follows:

**§ 54.507 Cap.**

(a) Amount of the annual cap. The aggregate annual cap on federal universal service support for schools and libraries shall be \$3.9 billion per funding year, of which \$1 billion per funding year will be available for category two services, as described in § 54.502(a)(2), unless demand for category one services is higher than available funding.

(1) Inflation increase. In funding year 2016 and subsequent funding years, the \$3.9 billion funding cap on federal universal service support for schools and libraries shall be automatically increased annually to take into account increases in the rate of inflation as calculated in paragraph (a)(2) of this section.

\* \* \* \* \*

(3) Public notice. When the calculation of the yearly average GDP-CPI is determined, the Wireline Competition Bureau shall publish a public notice in the FEDERAL REGISTER within 60 days announcing any increase of the annual funding cap including any increase to the \$1 billion funding level available for category two services based on the rate of inflation.

\* \* \* \* \*

(c) Requests. The Administrator shall implement an initial filing period that treats all schools and libraries filing an application within that period as if their applications were simultaneously received. The initial filing period shall begin and conclude on dates to be determined by the Administrator with the approval

of the Chief of the Wireline Competition Bureau. The Administrator shall maintain on the Administrator's website a running tally of the funds already committed for the existing funding year. The Administrator may implement such additional filing periods as it deems necessary.

(d) Annual filing requirement. (1) Schools and libraries, and consortia of such eligible entities shall file new funding requests for each funding year no sooner than the July 1 prior to the start of that funding year. Schools, libraries, and eligible consortia must use recurring services for which discounts have been committed by the Administrator within the funding year for which the discounts were sought.

(2) Installation of category one non-recurring services may begin on January 1 prior to the July 1 start of the funding year, provided the following conditions are met:

- (i) Construction begins after selection of the service provider pursuant to a posted FCC Form 470,
- (ii) A category one recurring service must depend on the installation of the infrastructure, and
- (iii) The actual service start date for that recurring service is on or after the start of the funding year (July 1).

(3) Installation of category two non-recurring services may begin on April 1 prior to the July 1 start of the funding year.

(4) The deadline for implementation of all non-recurring services will be September 30 following the close of the funding year. An applicant may request and receive from the Administrator an extension of the implementation deadline for non-recurring services if it satisfies one of the following criteria:

- (i) The applicant's funding commitment decision letter is issued by the Administrator on or after March 1 of the funding year for which discounts are authorized;
- (ii) The applicant receives a service provider change authorization or service substitution authorization from the Administrator on or after March 1 of the funding year for which discounts are authorized;
- (iii) The applicant's service provider is unable to complete implementation for reasons beyond

the service provider's control; or

(iv) The applicant's service provider is unwilling to complete installation because funding disbursements are delayed while the Administrator investigates the application for program compliance.

\* \* \* \* \*

**§ 54.509 [Removed and Reserved]**

11. Remove and reserve § 54.509.

**§ 54.518 [Removed and Reserved]**

12. Remove and reserve § 54.518.

**Subpart I---Administration**

13. Revise § 54.720 to read as follows:

**§ 54.720 Filing deadlines.**

(a) An affected party requesting review or waiver of an Administrator decision by the Commission pursuant to § 54.719, shall file such a request within sixty (60) days from the date the Administrator issues a decision.

(b) An affected party requesting review of an Administrator decision by the Administrator pursuant to § 54.719(a), shall file such a request within sixty (60) days from the date the Administrator issues a decision.

(c) In all cases of requests for review filed under § 54.719(a) through (c), the request for review shall be deemed filed on the postmark date. If the postmark date cannot be determined, the applicant must file a sworn affidavit stating the date that the request for review was mailed.

(d) Parties shall adhere to the time periods for filing oppositions and replies set forth in 47 CFR 1.45.

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